

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

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:
SONY MUSIC ENTERTAINMENT, et al.,:
Plaintiffs, :
:
-vs- : Case No. 1:18-cv-950
:
COX COMMUNICATIONS, INC., et al.,:
Defendants. :
:
-----:

VOLUME 9 (P.M. Portion)

TRIAL TRANSCRIPT

December 12, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

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INDEX

OPENING STATEMENTS BY:

<u>WITNESS</u>	<u>EXAMINATION</u>	<u>PAGE</u>
----------------	--------------------	-------------

CHRISTOPHER KENNETH MONSON

DIRECT	2149
REDIRECT	2176

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CROSS	2249

CLOSING ARGUMENTS BY:

COURT'S RULINGS/JURY INSTRUCTIONS

1 A F T E R N O O N S E S S S I O N

2 NOTE: The afternoon portion of the case on
3 December 12, 2019, begins in the absence of the jury as
4 follows:

5 JURY OUT

6 THE COURT: All right. Are we ready to address the
7 Freamster issue? Mr. Zebrak.

8 MR. ZEBRAK: Thank you, Your Honor. So I spoke for
9 quite a bit with Mr. Brody, and I think it makes sense to
10 identify where I think we have agreement about the scope of
11 Dr. Feamster's testimony and the issues that are not at play.

12 THE COURT: Okay.

13 MR. ZEBRAK: And then we can address what remains.

14 THE COURT: Yes, sir.

15 MR. ZEBRAK: So -- and this is not necessarily
16 exactly in the order of the bench memo, but I think this is
17 probably the easiest way to deal with it. So Dr. Feamster is
18 not going to be testifying about the accuracy or reliability of
19 Audible Magic.

20 THE COURT: Okay.

21 MR. ZEBRAK: We're in agreement on that.

22 Dr. Feamster, No. 2, will not be testifying about MarkMonitor's
23 use of Audible Magic in terms of disputing whether for each of
24 the files, that they've been looked up in Audible Magic and
25 received a positive verification. He's simply going to have a

1 little bit of context for his testimony where he explains that
2 Audible Magic was a component of the MarkMonitor system, but
3 he's not going to contest that it wasn't used for the initial
4 file identification or that Audible Magic's, in any way,
5 inaccurate or unreliable.

6 THE COURT: Okay.

7 MR. ZEBRAK: And then the third area actually has
8 three subcomponents, but in the course of summary judgment
9 briefing, Dr. Feamster put in two declarations, and he will not
10 be testifying about what was in those declarations.

11 Specifically, No. 1, that hash values are unreliable
12 because of something called hash collisions.

13 THE COURT: Right.

14 MR. ZEBRAK: Or, No. 2, that hash values are
15 unreliable because hashes can be broken with those that have
16 tremendous technical and monetary resources. It was something
17 he had in one of his declarations about that.

18 And then the third area is that he will not be
19 testifying that peers sometimes share lawfully acquired files,
20 whether intentionally or inadvertently. That was another area
21 that crepted into his summary judgment declaration that was not
22 part of his prior testimony.

23 THE COURT: Wasn't part of his -- neither of those
24 were part of his expert report; is that right?

25 MR. ZEBRAK: That's correct.

1 THE COURT: Okay.

2 MR. ZEBRAK: And then the fourth and final area
3 that's out, before we get to what is at issue, is that
4 Dr. Feamster is going to testify with respect to the hard drive
5 that was produced in this action. He's simply going to say
6 that he received it and looked at it. He's not going to
7 testify about any analysis of it, you know, in terms of what it
8 contained or didn't contain and how that related to the other
9 evidence.

10 THE COURT: All right.

11 MR. ZEBRAK: So I don't know if Your Honor wants me
12 to pause there and get to what is at issue or -- did I get that
13 right?

14 MR. BRODY: If I could, Your Honor?

15 THE COURT: Yes, sir.

16 MR. BRODY: I think that's basically right, and like
17 I said this morning, I think a lot of these are non-issues. On
18 Audible Magic, let me say what I think Mr. Zebrak was saying,
19 but -- just so we're on the same page.

20 THE COURT: Accuracy of the --

21 MR. BRODY: What he's going to testify to basically
22 is to kind of recapitulate some of what the jury has already
23 heard, what Audible Magic is, how it fits into the system, just
24 to set the context for the subject matter of his -- the real
25 subject matter of his testimony. But we're not going to be,

1 you know -- we've said what we had to say about Audible Magic
2 in motions, and we're not going to be rehashing that here.

3 THE COURT: Okay.

4 MR. BRODY: On the declaration, yes, no hash
5 collisions. We're not going to elicit testimony that peers can
6 share files lawfully.

7 Broken hashes, I'm not quite sure what that means,
8 but I think we're not going to say that, elicit any testimony
9 on that. We are going to elicit testimony, or we hopefully are
10 going to be eliciting testimony, depending on what Your Honor
11 has to say on the subject, about the issues that were addressed
12 during his deposition.

13 So our view is going to be depending on what you say,
14 what's in the deposition is fair game, but we have no intention
15 of going beyond that. So whatever was in the declaration --
16 we're not relying on the declaration as a basis for introducing
17 new evidence.

18 And Mr. Zebrak's correct about the hard drive. He's
19 just going to mention that that's something he reviewed.

20 THE COURT: Okay. So he's going to be limited to the
21 contents of his expert report, and he's not going to go outside
22 of that. So if there were declarations which were put in
23 subsequently --

24 MR. BRODY: Correct.

25 THE COURT: -- he's not going to testify to those.

1 MR. BRODY: Well, yes to the second thing. He will
2 certainly testify on what's in his report. The dispute between
3 us is whether he can testify on the subject matter that arose
4 during his deposition.

5 THE COURT: Well, what was that? Is this the
6 bitfields and the --

7 MR. BRODY: So -- yeah, yeah. So basically what he
8 said in his report was that it's absolutely critical that you'd
9 download a piece of the file from the peer in order to know
10 what it is. And I think everybody agrees he can testify about
11 that. That's in the report, you know, he'll give his views.

12 At deposition -- so he does that on -- sets -- puts
13 in their report on the, I think, the end of May, 29th. Two
14 weeks later, he's deposed, and Mr. Zebrak asked him about that,
15 and he testified that -- the report says that the peers may not
16 have all the pieces of a file and the -- let me get the exact
17 language.

18 It's absolutely critical to download file contents to
19 verify that a peer is, in fact, sharing content, because, one,
20 in many cases, a peer in a network such as BitTorrent often
21 does not have the entire file, but only portions or pieces of
22 the file. In some cases, even the entire collection of peers
23 is exchanging a file or files and may not have the entire file.

24 And then he also said, a paragraph I'm not seeing,
25 that it is often the case that the pieces they have don't even

1 amount to an operational file, that you couldn't play any of
2 the music.

3 At deposition, Mr. Zebrak asked him, appropriately,
4 what the basis for that was, and he explained that the reason
5 you'd have that disparity -- there are a couple of reasons.
6 One is that the file can be corrupted either in transit or in
7 storage on the hard drive, and the other is that there may be
8 dishonesty in BitTorrent. People may lie about what files they
9 have.

10 And then there's 20 pages of questions and answers on
11 that subject. And Mr. Zebrak's position, I think, is that
12 that's beyond the report and it's not fair game.

13 Our position is that it's, you know, explaining the
14 basis of the report, that it was asked about at the deposition,
15 that Ms. Frederiksen-Cross had an opportunity to respond, and
16 it's well within what the drafters of Rule 26 contemplated by
17 way of appropriate supplementation for an expert report.

18 As Your Honor's aware, I'm sure, the 1993 amendments
19 and the commentary specifically contemplate that experts can
20 supplement in deposition. And so that's what we want to do.
21 We want to do what's in the report and what's in the
22 deposition. No more, no less.

23 THE COURT: Okay. All right, Mr. Zebrak?

24 MR. ZEBRAK: Thank you, Your Honor. So this -- Your
25 Honor has already looked at this issue and ruled. The --

1 THE COURT: Well, no, I excluded the dataset because
2 I found it wasn't reliable, hadn't been, you know,
3 authenticated and -- but that was really all I was presented
4 with as far as the Audio (sic) Magic.

5 MR. ZEBRAK: Right. Right.

6 THE COURT: I don't know what other data has been
7 produced. I mean, we looked at the rebuttal report. It really
8 doesn't talk about lying, and it talks instead just about an
9 absence of data more than the other issues. But you asked him
10 in his deposition about, okay, where does this come from? And
11 he proceeded to tell you, right? Isn't that what a -- that's
12 what the deposition is for.

13 So I guess the first question is do you believe that
14 he hit sufficiently on it in any of his report testimony, so
15 that it's fair for him to supplement in his deposition? And if
16 not, why not?

17 MR. ZEBRAK: Sure. So the issue that we're
18 challenging here was not addressed in his report. He did speak
19 to an aspect of it at his deposition, but --

20 THE COURT: So tit for tat and the -- or is that
21 something different?

22 MR. ZEBRAK: Well, that's something different --

23 THE COURT: Okay.

24 MR. ZEBRAK: -- that is in his report.

25 If I could just walk Your Honor through it briefly?

1 So --

2 THE COURT: Yeah, present it the way you intended to
3 present it, and see if I catch up with you.

4 MR. ZEBRAK: Thank you, Your Honor. Thank you, Your
5 Honor. So, look, the -- Your Honor knows the rules very well.
6 An expert report is supposed to identify the conclusion and the
7 bases thereof.

8 His report says you need to do a download for two
9 reasons: No. 1, the peer may not have the entirety of the
10 file. They may have a portion of it. Now, factually that's
11 legally confusing because -- but that's a separate issue for
12 later in the case. And the second issue is he said the other
13 peers within the swarm may not have all the pieces you're
14 looking for. Those were his two reasons, no more, no less.

15 At the deposition -- and Your Honor understands how
16 depositions go. Lots of issues come up, and, you know, I
17 probed this issue because he, you know, raised this issue of
18 lying bitfields. I never heard of lying bitfields, which is
19 another way of saying falsification of bitfield data.

20 Cox in its brief said that they don't understand what
21 we're referring to about lying bitfields. I was shocked when I
22 saw that, Your Honor. In the Daubert briefing, we specifically
23 had a whole section of our report -- of our Daubert motion
24 saying that Dr. Feamster should not be allowed to talk about
25 lying bitfields because it wasn't in his report.

1 And they came back and gave Your Honor a counter-
2 argument to that in their opposition, and they had a long
3 footnote, and nowhere in their brief or their opposition did
4 they raise the argument they're now raising today, which is
5 that he supplemented it in his deposition and it's now fair
6 game.

7 They raised a whole host of other arguments that
8 don't hold water, and that precisely was the reason, I believe,
9 why Your Honor in the opinion about Dr. Feamster clarified that
10 he can't testify outside his report. It was specifically the
11 briefing about what wasn't in his report that the parties
12 addressed about lying bitfield.

13 And this is very wonky, these lying bitfields.
14 Really what it concerns is that the BitTorrent system relies on
15 hash values, and a peer, once they receive a piece, they verify
16 what it contains, then they report to the world what they have.
17 They do it in two ways, Your Honor. One is they identify the
18 hash for what they have, and the other is they identify in the
19 bitfield the percent of the file they have.

20 And what Dr. Feamster now wants to do is specifically
21 address what we in Cox argued and Your Honor ruled on at the
22 Daubert stage about lying bitfields, and he wants to take it
23 even a step further in his report and say not just do peers
24 sometimes report false bitfield information about the
25 percentage they have, but he also wants to talk, I believe,

1 about false hash reporting.

2 And, you know, Your Honor, we've all worked really,
3 really hard on this case, and the idea that we're having this
4 issue now, if they wanted to supplement his report, they could
5 have, and we would have addressed it with our expert in
6 rebuttal -- in a reply report, and we would have put on
7 different trial testimony.

8 And this idea of corrupted files, again, it's not in
9 his report, and, you know, I don't know what else to say about
10 it, Your Honor, except this is not what he testified about.
11 And even when -- excuse me, not what he put in his report.

12 And even when I spoke to him about lying bitfields,
13 he couldn't cite any specific studies. It was, it was this
14 general statement. And then when I pushed him after all this
15 testimony that Mr. Brody referenced, he finally conceded, well,
16 maybe it could happen about 1 percent of the time.

17 And, Your Honor, this jury is not going to benefit
18 from more confusing testimony that distracts them from the
19 merits, and I think that's all this is.

20 THE COURT: All right. Thank you.

21 MR. BRODY: May I respond, Your Honor?

22 THE COURT: Yes, sir, you may.

23 MR. BRODY: First of all, let me just clear up one, I
24 think, factual error. I think Mr. Zebrak had some of the
25 testimony confused.

1 He did testify that the disc corruption issue
2 occurred 1 to 2 percent of the time. There never, there never
3 was testimony about the extent to which dishonesty happens in
4 these networks. There was extensive questioning: Do you think
5 it happens? Do you think it's widespread?

6 Yes, I think it's widespread. There are studies.

7 And it was that type of testimony that was available,
8 and that's all we would ask him to do.

9 Second --

10 THE COURT: All right. Yeah, I thought in the
11 deposition, the part that I read said he was, he was unaware of
12 any studies.

13 MR. BRODY: I'll get Your Honor the citations.

14 THE COURT: Maybe somewhere else --

15 MR. BRODY: I think he says there are studies. I
16 think he may even have said: I can't remember what they are
17 right now just sitting here.

18 THE COURT: Okay.

19 MR. BRODY: But I've seen studies. I know it's other
20 people who've counted.

21 I'm not going to ask him, you know, what are the
22 studies. I'm really just going to ask him: Is this a
23 phenomenon?

24 Well, what he says in his deposition, that there are
25 incentives to do it, there are ways to do it, and therefore,

1 there's every reason to believe that it's widespread, or
2 "likely," I think, is the phrase he used.

3 So that's really what we're talking about.

4 THE COURT: Why didn't you supplement his report to
5 add this new area?

6 MR. BRODY: Well, I, I think there are two reasons
7 for that, Your Honor. One is we'd already put in the report.
8 We didn't --

9 THE COURT: Well, this is back in the end of May.

10 MR. BRODY: Yeah. So, so the deposition was between
11 the two reports. So I think we felt that we had given -- they
12 had legitimately inquired, probed into what he did opine about,
13 namely, that this, this was inadequate, and the problem of why
14 anybody would want to sort of rehash these bitfields, and he
15 gave them that testimony.

16 And the -- I probably was being a little cryptic
17 before. The, the 1993 commentary on the amendments to Rule 26
18 specifically say there is no obligation to provide supplemental
19 or corrective information that has otherwise been made known to
20 the parties in writing or during the discovery process, as when
21 a witness not previously disclosed is identified during the
22 taking of a deposition or when an expert during a deposition
23 corrects information contained in an earlier report.

24 Now, I will concede this is not a correction, but it
25 is, obviously, a -- I guess I'd say a clarification or an

2141

1 amplification of what is explicitly in the report, namely, that
2 this kind of checking is not done and that it should be done
3 and that he's going to -- as he explained, he was going to
4 contest the reliability of the data on that basis.

5 They had -- Ms. Frederiksen-Cross put her report in
6 two weeks later. They scheduled the deposition when they did,
7 completely appropriately, so that they would be able to respond
8 to what was in the deposition, and with due respect, if they --
9 if we had simply written on a piece of paper what he said in
10 the deposition or just clipped it out and put the title page on
11 it, it would be, you know, a supplemental report.

12 They had -- everything that there was to have about
13 what he's going to say, they had an opportunity to respond to
14 it. Mr. Zebrak is going to do a bang-up job of cross-examining
15 him on it, and, you know, I really think it's -- there's no
16 prejudice to the jury, and it's a chance to give them a
17 complete picture of how these systems operate and, and what the
18 challenges are for companies like MarkMonitor and Cox, when
19 they're trying to figure out what's going on on these
20 computers.

21 THE COURT: Okay. Thank you.

22 Mr. Zebrak, briefly.

23 MR. ZEBRAK: Very briefly, Your Honor. So I'm now
24 reading from page 313 of his deposition, line 3.

25 To date, you have no expert opinion about the

1 percentage likelihood that the bitfield information about what
2 appears sharing will be inaccurate?

3 Sorry, too fast? Oh, my apologies.

4 THE COURT: Page 303?

5 MR. ZEBRAK: 313.

6 THE COURT: 313.

7 MR. ZEBRAK: And then he proceeds to give more sort
8 of deflection. Then he finally says: But since you've asked
9 me over and over and over again specifically for numbers, let
10 me do my best. These would probably be in the range of 1
11 percent, okay?

12 So, you know, Your Honor, we've been trying to argue
13 this based on the facts of what occurred. Right here at his
14 deposition, he says probably 1 percent.

15 And again, in his report, he gave two reasons got why
16 a download is needed, and it was the two I said --

17 MR. BRODY: What page is that, Mr. Zebrak?

18 MR. ZEBRAK: 313 of his deposition, sir.

19 THE COURT: He's asking him the percentage likelihood
20 that the bitfield information about what a peer is sharing will
21 be inaccurate.

22 MR. ZEBRAK: Yeah. And to Mr. Brody's benefit, he
23 wasn't at the deposition; somebody else was.

24 THE COURT: Right.

25 MR. ZEBRAK: So I don't fault him for saying I got

1 this wrong.

2 THE COURT: Mr. Lane.

3 MR. ZEBRAK: But I was there, and I've looked at the
4 transcript very closely, as I did his report, and we're, we're
5 significantly prejudiced if -- this is not a clarification
6 about his earlier --

7 THE COURT: Well, but you had it since end of May,
8 right?

9 MR. ZEBRAK: Well, but -- yes, Your Honor, but here's
10 the issue: Why would we -- you know, in a deposition, he's
11 answering my questions, you know? In many other contexts,
12 counsel will say, well, we're not intending to do that at
13 trial. He was just answering your questions.

14 So, you know, it's a catch-22. Am I supposed to put
15 in new expert reports on issues they don't intend to present at
16 trial? And, Your Honor, we briefed this. They responded.
17 Your Honor looked at it.

18 And they didn't say, here, we intend to still put
19 this on at trial. It's trial by ambush.

20 THE COURT: Yeah. No, but I didn't have the specific
21 information or at least I don't recall having the specific
22 information that you've honed in on now. What I was talking
23 about was that the expert testimony at trial should be limited
24 to the expert reports, and -- but, you know, they're -- I'm
25 going to allow the testimony. Your exception is noted. And if

1 they want to even put it in when he's stated that it would
2 apply to 1 percent of the data, then I'll allow him to do it.

3 He's limited to not now expressing a fact that, oh, I
4 went back and I did research after the deposition, and now this
5 is my position. He'll be limited to the offer at the time of
6 the deposition.

7 But I think that the rules allow supplementation
8 through other forms, including deposition testimony, and you
9 did take him through it at length. So I don't find that you're
10 surprised by it.

11 MR. ZEBRAK: Well --

12 THE COURT: How about the demonstratives?

13 MR. ZEBRAK: Well --

14 MR. BRODY: Your Honor, if I could just make one
15 heads up for what's coming?

16 THE COURT: Yes, sir.

17 MR. BRODY: I -- it's always a pleasure dealing with
18 Mr. Zebrak, but I actually think that passage is in a different
19 context from the one he represented.

20 THE COURT: Okay.

21 MR. BRODY: We'll thrash it out on the stand.

22 MR. ZEBRAK: Well --

23 THE COURT: Demonstratives.

24 MR. ZEBRAK: Yes, Your Honor. Might I ask for one
25 clarification about the foregoing?

1 THE COURT: Yes, sir.

2 MR. ZEBRAK: So that was about bitfield information.

3 THE COURT: Correct.

4 MR. ZEBRAK: Today is he allowed to come in and say
5 that peers sometimes falsely report the hashes they had? That
6 was not something he mentioned at deposition.

7 THE COURT: No. I mean, if it's not in his
8 deposition or his expert reports, it's not coming in.

9 MR. ZEBRAK: Okay. So there were two issues we had,
10 Your Honor, about the slides. I believe with Your Honor's
11 ruling, that now deals with slide 41, where he's going to talk
12 about corrupted files and lying peers, although I assume lying
13 peers will be restricted to bitfield information, not hash
14 values.

15 THE COURT: Is that correct, Mr. Brody?

16 MR. BRODY: No. I believe he addressed hash values
17 in the deposition. I'll find the passage.

18 MR. ZEBRAK: Your Honor, the next issue is slide 44
19 of Mr. Feamster's demonstratives.

20 Oh, do you have their demonstratives, Your Honor?

21 THE COURT: No.

22 MR. ZEBRAK: Might I -- do you have a copy for the
23 judge?

24 THE COURT: I was thinking it was going to go up on
25 the screen any moment now.

1 MR. ZEBRAK: So, Your Honor --

2 THE COURT: 44?

3 MR. ZEBRAK: Yes, Your Honor.

4 THE COURT: Yeah.

5 MR. ZEBRAK: I didn't want to proceed before Your
6 Honor had looked at it.

7 THE COURT: Okay.

8 MR. ZEBRAK: Your Honor, this slide is incredibly
9 misleading and prejudicial, and I'll explain why. Dr. Feamster
10 did not analyze the content files produced on the drive that
11 have the hashes that were the subject of these notices. His
12 opinion is you need to do a download, and he, he wants to
13 characterize hash values, which is a scientific term, he wants
14 to call them metadata, and he's going to want to say metadata
15 isn't enough, and that's fine. He's going to do that, and
16 we'll deal with him appropriately on cross, but what counsel is
17 doing here is implying or expressly stating that he did an
18 analysis he never did.

19 What you see here on the slide before you, Your
20 Honor, are examples that were discussed earlier in the trial
21 with this Bill Withers and Tammy Wynette. He never did this
22 analysis.

23 When I spoke with Mr. Brody, it's my understanding
24 that Dr. Feamster is using this merely to illustrate his point
25 that it's just data, and you can have the same name but

1 different contents, but instead, it's very deceptive. He wants
2 to use it for what occurred in the trial earlier, and he's
3 basically tailoring this slide to the earlier evidence, and it
4 sort of lets the jury think he did an analysis he never did.

5 And so we would ask that they either delete this
6 slide or, as I asked Mr. Brody a few hours ago, illustrate the
7 generic point he's trying to make with anything he wants, but
8 not the earlier evidence regarding an analysis he never did.

9 THE COURT: Okay. Is that it? 41 and 44 are your --
10 41 is --

11 MR. ZEBRAK: 41 is mooted by Your Honor's ruling. 44
12 is the remaining slide that we take an issue with.

13 THE COURT: Okay. All right, Mr. Brody, do you want
14 to be heard?

15 MR. BRODY: Well, I have to admit I thought I had
16 understood from Mr. Zebrafak that we had resolved this issue and
17 it wasn't going to -- it was going to turn on the deposition
18 question, but that's okay. So I often misunderstand people,
19 and we'll just deal with the problems that exist.

20 What we thought would be helpful in this slide was
21 simply to put the generic point that he's making in the context
22 of the actual files in the case, so that we're talking about
23 something concrete.

24 So that was the basic motivation behind it. It is
25 not -- I am certainly not going to ask him if he's done an

1 analysis of this particular file, you know, because he didn't,
2 and nobody has. And really, that's kind of the point of his
3 testimony. The point of his testimony is that when you -- if
4 you look at that jewel case, in the evidence, the equivalent of
5 that jewel case showing Bill Withers is a line on that
6 spreadsheet that says Bill Withers' song was matched by Audible
7 Magic and so on and so forth, and his point is that nobody went
8 behind that, that there was never this download and rehash that
9 was done, so the investigation wasn't done, and you don't know
10 what's in the file.

11 And I don't -- you know, I will not even remotely
12 represent that he's done some kind of forensic analysis.

13 THE COURT: All right. I'm going to allow 44 for
14 that purpose. Anything else before we get the jury?

15 MR. BRODY: Your Honor, two things. Well, I'm going
16 to -- while the next witness is up, I'm going to find the
17 passage about hashing so I can share that with Your Honor.

18 THE COURT: Okay.

19 MR. BRODY: Second, we would like to make a proffer
20 on the Audible Magic spreadsheet, recognizing that Your Honor
21 has addressed that issue in limine.

22 THE COURT: Yeah.

23 MR. BRODY: I can do that pretty quickly if you'd
24 like it now or at break or whatever.

25 THE COURT: How quickly?

1 MR. BRODY: I don't know, five minutes, two minutes.

2 THE COURT: All right. We'll do it at a break then,
3 or you can put it in writing.

4 MR. BRODY: Okay. We'll put it in writing and submit
5 it.

6 THE COURT: All right, fine.

7 All right, Joe, let's get our jury, please.

8 NOTE: At this point, the jury returns to the
9 courtroom; whereupon the case continues as follows:

10 JURY IN

11 THE COURT: All right, please have a seat.

12 All right, next witness?

13 MS. LEIDEN: Cox calls Dr. Christopher Monson.

14 CHRISTOPHER KENNETH MONSON, PH.D., DEFENDANTS' WITNESS, SWORN

15 THE COURT: All right. Good afternoon. Please
16 proceed.

17 MS. LEIDEN: Thank you, Your Honor.

18 DIRECT EXAMINATION

19 BY MS. LEIDEN:

20 Q. Good afternoon, Dr. Monson.

21 A. Good afternoon.

22 Q. Can you please state your full name for the record.

23 A. Christopher Kenneth Monson.

24 Q. And, Dr. Monson, what is your occupation?

25 A. CTO of Data Machines Corp. and --

2150

1 Q. And --

2 A. Sorry, I'm a lecturer at Johns Hopkins.

3 Q. And what type of company is that?

4 A. Government contractor, research.

5 Q. And you, I believe, said that your position was a CTO?

6 A. Correct.

7 Q. And what does that stand for?

8 A. Chief technology officer.

9 Q. Dr. Monson, briefly, what is your educational background?

10 A. I have a Ph.D. in Computer Science from Brigham Young
11 University.

12 Q. Do you hold any other degrees?

13 A. Yes. I also have a Master's Degree in Computer Science
14 and a Bachelor's Degree in Electrical Engineering from the same
15 school.

16 Q. Dr. Monson, was there a time that you worked for a company
17 called Harbor Labs?

18 A. Yes, in 2013.

19 Q. What type of company is Harbor Labs?

20 A. I think a legal consulting company would be a good way to
21 put it, security.

22 Q. And you said that you worked there in 2013?

23 A. Correct.

24 Q. What was your title at Harbor Labs, if any?

25 A. I believe it was senior research engineer.

1 Q. And generally speaking, what were your duties at Harbor
2 Labs?

3 A. Code review, writing expert witness reports, briefing
4 expert, Dr. Avi Rubin specifically, on expert testimony.

5 Q. And generally speaking, on what topics did you draft
6 expert reports and conduct analysis?

7 A. Typically related to security, computer security.

8 Q. Computer security?

9 And you said that you had left Harbor Labs in 2013?

10 A. Yes.

11 Q. Where did you work immediately following Harbor Labs?

12 A. A company called Data Tactics.

13 Q. What type of company is that?

14 A. A government contracting company, research, also.

15 Q. And did you have a job after that before you came to your
16 current position?

17 A. Yes. I was there for a few weeks and then rejoined Google
18 for several years.

19 Q. What was your position at Google?

20 A. Senior software engineer.

21 Q. And you moved from Google to Data Machines Corporation?

22 A. That's correct.

23 Q. While you were working at Harbor Labs in 2013, were you
24 involved with an evaluation of the MarkMonitor AntiPiracy
25 system?

2152

1 A. Yes.

2 Q. And going back a little bit, prior to working at Harbor
3 Labs, had you conducted analyses of other software systems?

4 A. Not formally, but informally certainly.

5 Q. Can you expand on that?

6 A. Well, as part of the job as a software engineer, you do
7 lots of analyzing of other software systems. So I would write
8 documents, design documents to extend other systems and so
9 forth.

10 Q. And now turning it back again to the evaluation of the
11 MarkMonitor AntiPiracy system, can you explain what your
12 involvement with that evaluation was?

13 A. It was a collaborative effort between me and Dr. Seth
14 Nielson. We came up with the content together as we
15 interviewed various people about the system, and then I wrote
16 the bulk of the words in the report.

17 Q. And was there a report issued by Harbor Labs containing
18 the evaluation of the MarkMonitor AntiPiracy system?

19 A. Yes.

20 Q. Dr. Monson, could you turn to tab 1 in your binder, which
21 is DX 89? This was previously admitted.

22 And, James, if you could publish it, please?

23 A. Yes.

24 Q. Okay. Dr. Monson, do you recognize this document as the
25 evaluation that Harbor Labs drafted concerning the MarkMonitor

2153

1 system?

2 A. May I look at it for a moment?

3 Q. Yes, you may. Please take your time.

4 A. To the best of my knowledge, this is the report, yes.

5 Q. And, Dr. Monson, do you have an understanding of what the
6 MarkMonitor AntiPiracy system is?

7 A. My memory is a little fuzzy, but yes, vaguely.

8 Q. And what is your understanding?

9 A. That it is intended to discover when copyrighted material
10 is available for download via various networks like BitTorrent,
11 etc., and then issue -- to hopefully do so with high fidelity,
12 and then issue -- what's the word I'm looking for -- notices to
13 people who are hosting this content or downloading it.

14 Q. And you mentioned BitTorrent. Do you have an
15 understanding of what BitTorrent is generally?

16 A. As a general -- as a general system, yes. Not in detail.

17 Q. What's your general understanding?

18 A. Large files, like videos, are split up in small pieces and
19 spread out on multiple computers on the internet, and to
20 download, you connect to all those computers and pull down
21 various parts of file and then reassemble them on yours.

22 Q. And have you heard the term "peer-to-peer file sharing"?

23 A. Yes.

24 Q. And would that be something that you would characterize
25 BitTorrent as?

2154

1 A. Yes.

2 Q. Okay. Have you ever used peer-to-peer file sharing?

3 A. Yes.

4 Q. In what context?

5 A. Downloading Linux ISOs, for example, just images of
6 operating systems.

7 Q. And in what context did you do that downloading of those
8 files?

9 A. I still do it now actually. It's a faster way to get
10 images to install on your machine.

11 Q. So you do that as part of your current job?

12 A. Not as part of the job. Often as a hobby.

13 Q. And turning back to the MarkMonitor evaluation that's in
14 front of you, do you have a recollection of why Harbor Labs
15 came to evaluate the MarkMonitor system?

16 A. I do not.

17 Q. Do you have an understanding of what the Center for
18 Copyright Information is?

19 A. More or less.

20 Q. What's your understanding?

21 A. People who are interested in making sure that copyrights
22 are honored.

23 Q. And, Dr. Monson, were there portions of this report that
24 you drafted?

25 A. Yes.

2155

1 Q. Do you recall which portions, generally speaking?

2 A. I drafted most of this report. Most of the language is
3 mine.

4 Q. Did you have a hand in drafting all of the sections?

5 A. I believe so. As I review it, it looks -- that seems to
6 be according to my recollection, yes.

7 Q. And at the bottom of that first page that you're looking
8 at, there is a section called Materials Relied Upon.

9 Do you see that?

10 A. Yes.

11 Q. And does that look like an accurate representation of the
12 source material that you had access to for this evaluation?

13 A. Yes, it does.

14 Q. Okay. And one of the documents that's listed in the
15 materials relied upon is the memorandum of understanding. Do
16 you see that?

17 A. Yes.

18 Q. Do you have an understanding of what that memorandum of
19 understanding is?

20 A. I don't recall.

21 Q. If you could please turn to page 6 of that document?

22 A. Oh, I see. Yes.

23 Q. And when you're there, do you see that there is a section
24 on this page entitled Reliability?

25 A. Yes.

2156

1 Q. So, Dr. Monson, did Harbor Labs assess the reliability of
2 the -- of MarkMonitor's software?

3 A. Of the software directly, no.

4 Q. Of the MarkMonitor system?

5 A. For what we had access to.

6 Q. And were you personally involved in that analysis?

7 A. Yes.

8 Q. Okay. Do you recall why -- or strike that.

9 James, if you could, go back to the full page,
10 please.

11 Do you see that on this page and the page immediately
12 following, there's a number of subheaders relating to testing?

13 A. Yes.

14 Q. Okay. Why are there different types of testing listed
15 under the Reliability section?

16 A. Different kinds of testing can catch different kinds of
17 problems with software, and usually if you only use one kind,
18 then it's not sufficient to catch all the problems.

19 Q. Is it fair to say that testing is important to determine
20 whether a system is accurate?

21 A. Yes.

22 Q. Okay. And also to determining whether or not a system is
23 reliable?

24 A. Yes.

25 Q. And as I mentioned, there's, it looks like, three

2157

1 different types of testing that are called out here on pages 6
2 and 7. Do you see those three headers?

3 A. Yes, I do.

4 Q. And that's unit testing, whole-system testing, and canary
5 testing, right?

6 A. Correct.

7 Q. Okay. So at a high level, why did Harbor Labs look into
8 all three types of these testing?

9 A. I don't remember.

10 Q. Fair enough. It's been five years.

11 Starting with the unit testing on page 6, do you see
12 that section?

13 A. Yes.

14 Q. Okay. And at a high level, what does unit testing entail?

15 A. It tests a small piece of a system in isolation.

16 Q. And what's the purpose of conducting that type of test?

17 A. Well, small pieces of systems can have bugs in them, and
18 if they have bugs, then the bigger pieces that assemble them
19 don't work either. So you start there.

20 Q. And according to Harbor Labs' evaluation, was MarkMonitor
21 carrying out unit testing?

22 A. Yes.

23 Q. And what was the basis for Harbor Labs' understanding that
24 MarkMonitor was carrying out that unit testing?

25 A. That was as reported by the people we interviewed.

1 Q. And who were those people that were interviewed?

2 A. I don't remember names.

3 Q. Was it personnel at MarkMonitor?

4 A. Yes.

5 Q. Okay. So your understanding that MarkMonitor was carrying
6 out unit testing was solely the reporting from MarkMonitor
7 personnel?

8 A. That's correct.

9 Q. Okay. Now, looking at the next section there on page 7 --
10 James, could you blow up the whole-system testing section?
11 Thank you.

12 And generally speaking, Dr. Monson, what does
13 whole-system testing entail?

14 A. Well, how much detail would you like?

15 Q. A high level of detail.

16 A. High level of detail. Well, when you assemble all the
17 pieces together that you've unit tested, hopefully, you have a
18 big system. So a whole system might be everything from the
19 user interface to the servers that it's contacting to the
20 e-mails that it sends and all those parts. So a whole-system
21 test would make sure that all the pieces work together
22 properly.

23 Q. And what would be the purpose of conducting a whole-system
24 test?

25 A. To ensure that the connections between other tested

2159

1 components actually work right. An example would be you can
2 check that a dishwasher door opens properly and that a cabinet
3 door opens properly, but if you don't check that they're not
4 together, so you can't open both at the same time, that would
5 be a -- that would be a whole-system test failure, even though
6 the components are tested and work.

7 Q. Thank you. And according to this Harbor Labs evaluation,
8 was MarkMonitor conducting whole-system testing of the system?

9 A. Yes, after a manner of speaking.

10 Q. I'm sorry, what was the last --

11 A. After a manner of speaking, yes.

12 Q. What do you mean by as a manner of speaking?

13 A. There are many ways to conduct whole-system tests.

14 There's ad hoc, and there's more principled, and from what I'm
15 recalling as I read this document, they had more ad hoc
16 approaches to whole-system testing, but they were doing it.

17 Q. And what would ad hoc whole-system testing entail?

18 A. Well, there's a lot of ways to be ad hoc. As described in
19 this report, they would actually just try running things and
20 see if they seemed to work, which is pretty common.

21 Q. And you -- under this section here, can you read that
22 first sentence there?

23 A. Under Whole-System Testing?

24 Q. Yes?

25 A. MarkMonitor currently has no periodic whole-system test

2160

1 mechanism.

2 Q. If you could continue with the rest of the paragraph?

3 A. Certainly. They do occasionally perform such whole-system
4 end-to-end tests, but infrequently and without repeatable,
5 controlled conditions (for example, where agents would run in a
6 controlled environment with mocked torrent clients serving
7 known content with predictable characteristics designed to
8 exercise different features of the system).

9 Would you like me to continue?

10 Q. Yes, with that last sentence, please.

11 A. Thus, they rely wholly on the aforementioned unit testing
12 and on live-traffic tests to determine whether a new agent
13 deployment is functioning properly.

14 Q. Thank you. And generally speaking, would it be important
15 to conduct whole-system testing with repeatable and controlled
16 conditions?

17 A. Yes. There is some importance to that.

18 Q. Can you expand on that a little bit?

19 A. Sure. If, if a whole-system test is not repeatable, then
20 there's a big chance you can miss something after things have
21 changed. An example would be if I am -- I'm trying to think of
22 an example. I thought I had one.

23 If you went to Google and your search didn't work all
24 of a sudden, and they said, sorry, you're part of a test, you
25 wouldn't be very happy. What you want for them to do before

1 they launch it to the public is test it themselves in a way
2 that they're sure you're not going to run into that problem.
3 And so if you don't have a periodic repeatable test, then
4 there's -- you're running the risk of problems surfacing in
5 front of people and affecting people in a way that you may not
6 have intended.

7 MR. ZEBRAK: Your Honor, may we approach?

8 THE COURT: Yes, sir.

9 NOTE: A sidebar discussion is had between the Court
10 and counsel out of the hearing of the jury as follows:

11 AT SIDEBAR

12 MR. ZEBRAK: Dr. Monson is here as a fact witness.
13 He hasn't been tendered as an expert. He shouldn't be offering
14 opinions on the stand about why or how something should be
15 happening like that in marketing in terms of when and why
16 whole-system testing should occur and whether it should have
17 occurred here.

18 THE COURT: Ms. Leiden?

19 MS. LEIDEN: Dr. Monson indeed is not being offered
20 as an expert witness. He had personal involvement in the
21 assessment of the MarkMonitor system. I'm simply asking him to
22 go over the findings of the report and explain the bases of
23 that. The fact that he's also a software engineer is a fact,
24 but we're not offering him as an expert.

25 THE COURT: He's testifying at a high level about the

2162

1 report, and I think it's -- it's a murky area. I think it's
2 permissible. Your exception is noted.

3 MR. ZEBRAK: Thank you.

4 MS. LEIDEN: Thank you, Your Honor.

5 NOTE: The sidebar discussion is concluded; whereupon
6 the case continues before the jury as follows:

7 BEFORE THE JURY

8 THE COURT: Go ahead, please.

9 BY MS. LEIDEN:

10 Q. Dr. Monson, we were discussing the whole-system testing
11 just a moment ago. Do you recall that?

12 A. Yes.

13 Q. And I believe that the question was -- and apologies if
14 you had answered this already, but is it important to conduct
15 whole-system testing with repeatable and controlled conditions?

16 A. Yes.

17 Q. And why is that?

18 A. Would you like me to try to repeat exactly what I said? I
19 don't know if I remember.

20 Q. That's all right. That's all right. Were you finished
21 with your answer?

22 A. Yes, I was.

23 Q. Okay. Thank you.

24 And, Dr. Monson, you -- sorry.

25 And going down on page 7 there, there's the third

1 type of testing, which is canary testing. Do you see that?

2 A. Yes.

3 Q. Okay. And at a high level, what is canary testing?

4 A. So you can imagine launching something out into the wild
5 but only for a small portion of people. So going back to the
6 Google example, maybe they did do a test, maybe you were an
7 unlucky one, but you were only one of a billion people that
8 experienced a bad thing, and then they have systems that catch
9 that. That would be like a canary.

10 So you would be the unfortunate canary in that case.

11 So canary testing is launching a system in a small scale to
12 check and see if it stays working, and then as you gain
13 confidence, you can launch at a larger scale.

14 Q. And according to the Harbor Labs evaluation, was
15 MarkMonitor conducting canary testing?

16 A. Yes.

17 Q. And did Harbor Labs make any observation with respect to
18 how MarkMonitor was conducting those canary tests?

19 A. As it says here in the report, canary tests appear to be
20 performed manually in an ad hoc fashion.

21 Q. And where it says "ad hoc fashion," is that similar to the
22 ad hoc fashion that it was conducting the other testing?

23 A. Yes.

24 Q. Now, what are the implications, if any, of conducting
25 canary testing in an ad hoc fashion?

2164

1 A. It's a little more risky than having something established
2 that is periodic and automated.

3 Q. And could you look at the last sentence in that section
4 that starts with the word "Accordingly"?

5 A. Sure.

6 Q. And could you read that, please?

7 A. Accordingly, the canary testing performed by MarkMonitor
8 may miss false positives produced by an agent when more closely
9 watched behavior appears similar to existing agents.

10 Q. And do you have an understanding in this context what
11 false positives would be?

12 A. In the context of this report, I believe false positives
13 means content incorrectly identified as copyright -- no, a
14 download of content incorrectly identified as infringing, I
15 believe.

16 Q. And, Dr. Monson, based on Harbor Labs' analysis of
17 MarkMonitor, did Harbor Labs make any recommendations to
18 MarkMonitor?

19 A. I believe so.

20 Q. And were some of these recommendations relating to
21 MarkMonitor's testing of its, of its system?

22 A. Yes. Here on page 8, I see that.

23 Q. You're a little ahead of me. Yes, if you could turn to
24 page 8? And there's a section there titled Recommendations.
25 Could you read that sentence?

2165

1 A. Certainly. According to the information available to us
2 during the review process, the MarkMonitor AntiPiracy system
3 appears to be operating generally within the parameters set
4 forth within the MOU. That said, there are some areas that
5 call into question the long-term success of the system as
6 currently operated. Each of these will receive its own
7 subsection below.

8 Q. Thank you. And do you see there under the Recommendations
9 section, there's a subsection called Testing? Do you see that?

10 A. Yes.

11 Q. Okay. And generally speaking, what were Harbor Labs'
12 recommendations to MarkMonitor with respect to, to testing?

13 A. Sorry, my memory is not as good as the writing.

14 Q. If it helps, we can go through the specific types of
15 testing --

16 A. If you like.

17 Q. -- on the following page.

18 If you go to page 9 of that report, do you see again
19 there's another section, subsection called Unit Testing?

20 A. Yes.

21 Q. And could you read that first paragraph?

22 A. We believe that the unit testing described to us by the
23 MarkMonitor technical staff is largely sufficient. A QA
24 engineer ensures that modules have sufficient unit tests,
25 including negative tests, boundary tests, and so forth. Our

1 only recommendation in this area is that the unit tests that
2 affect allegations of infringement receive extra attention in
3 their design.

4 Q. And why did the Harbor Labs make that recommendation?

5 A. I do not remember.

6 Q. And could you go to the next subsection, titled
7 Whole-System Testing again?

8 A. Yes.

9 Q. And in that whole-system testing section, what were Harbor
10 Labs' recommendations to MarkMonitor with respect to
11 whole-system testing?

12 A. It appears that we wrote to add more testing for negative
13 outcomes to ensure that they are marked as negative and to make
14 sure the canary testing is part of policy with -- yeah, that's
15 what it says here.

16 Q. And do you see there in the fourth -- excuse me, third and
17 fourth paragraphs down, there's a reference to BitTorrent
18 there?

19 A. Yes.

20 Q. Okay. Would you mind reading that first paragraph that
21 starts "For example"?

22 A. For example, when new agents are released, they should at
23 the very least be tested against a dishonest BitTorrent client
24 that uploads incorrect pieces. The MarkMonitor design should
25 catch these faulty pieces during the check of the SHA-1 hash;

1 an end-to-end test where this behavior is verified is
2 essential.

3 Q. Can you read the next paragraph as well?

4 A. Another example is testing the conjunction of requirements
5 for generating an infringement notice. For example,
6 MarkMonitor requires that at least one full BitTorrent piece be
7 downloaded (this is essential for accuracy). It also requires
8 that some specified percentage of the data be downloaded. In
9 addition to these, an agent should be subjected to a test where
10 it receives a full piece but not enough of the download, and a
11 test where it receives enough of the download but never a full
12 and complete piece. In both of these cases, such tests would
13 verify that the agent cannot generate an infringement report.

14 Q. Thank you. And was it Harbor Labs' understanding that
15 MarkMonitor was downloading a piece of a file from BitTorrent?

16 A. Yes.

17 Q. And why, why would that be essential for accuracy?

18 A. That was not my argument, so I'm not sure why. I'm not a
19 BitTorrent expert.

20 Q. But you do recall that it was MarkMonitor's -- excuse
21 me -- that it was Harbor Labs' understanding that MarkMonitor
22 was doing that downloading?

23 A. Yes.

24 Q. And could we go back to the unit testing section on that
25 same page?

1 A. Yes.

2 Q. And do you see that -- could you read that first
3 paragraph, please?

4 A. We believe that the unit testing described to us by the
5 MarkMonitor technical staff is largely sufficient. A QA
6 engineer ensures that modules have sufficient unit tests
7 including negative tests, boundary tests, and so forth. Our
8 only recommendation in this area is that the unit tests that
9 affect allegations of infringement receive extra attention in
10 their design.

11 Q. Thank you. And could you read the example underneath
12 there?

13 A. For example, every element of the design examined in this
14 report must be tested. There must be unit tests validating the
15 correctness of the SHA-1 check on the downloaded pieces. There
16 must be a test ensuring that only content marked as verified in
17 the database can generate infringement case reports. There
18 must be similarly -- there must similarly be a test that the
19 torrent file used to download the verified content is the same
20 (or has the same info hash) as the torrent file used to track
21 alleged infringers.

22 Q. Thank you. Do you have any reason to doubt that this was
23 Harbor Labs' conclusion with respect to unit testing?

24 A. No.

25 Q. And finally, if we could go to the last section there on

1 that page called canary testing?

2 A. I don't see canary testing on page 9.

3 Q. I'm sorry. There's not a header, but I believe it's
4 referenced in the last paragraph on that same page.

5 A. Oh, I see. Okay. Would you like me to read that?

6 Q. Yes, please.

7 A. Furthermore, we recommend that the canary testing
8 occasionally performed by MarkMonitor be codified by policy
9 into a requirement for agent release. Moreover, the canary
10 test must include some check to ensure that all infringement
11 reports that would have been generated meet the requirements of
12 the design (e.g., the content was verified, the pieces
13 downloaded were accurate, etc.)

14 Q. I believe earlier you testified that all three types of
15 the testing that we went over are important, correct?

16 A. Yes.

17 Q. Important to the accuracy of a system?

18 A. It depends on what you mean by "accuracy."

19 Q. What would you understand -- you may have testified to
20 this before, but what accuracy would mean with respect to the
21 MarkMonitor AntiPiracy system?

22 A. Well, as laid out in the report, there are two different
23 aspects to accuracy that we talked about. One is recall, and
24 the other is precision. I think testing would actually be
25 important to both of them, so maybe it's not a word I should

2170

1 worry about right now.

2 Q. And I believe earlier you had testified that specifically
3 in this circumstance, accuracy would involve avoiding false
4 positives, correct?

5 A. That would -- yeah, that would be the definition of
6 precision, which would be a part of accuracy.

7 Q. So testing was important in the MarkMonitor system in
8 order to avoid false positives?

9 A. Correct.

10 MR. GOULD: Objection. Leading.

11 THE COURT: It is leading. I'll allow it.

12 BY MS. LEIDEN:

13 Q. Dr. Monson, do you know if MarkMonitor adopted any of
14 Harbor Labs' recommendations?

15 A. No.

16 MS. LEIDEN: I pass the witness.

17 THE COURT: All right. Thank you.

18 Cross-examination?

19 CROSS-EXAMINATION

20 BY MR. GOULD:

21 Q. Good afternoon, Dr. Monson. Nice to see you again.

22 A. Good afternoon.

23 Q. Dr. Monson, in conducting the review that Harbor Labs
24 performed -- let me back up. In conducting a review of any
25 system, you are able to look only at the information and system

1 that's provided and available to you; is that right?

2 A. Right.

3 Q. You're not presenting any opinions here or in the Harbor
4 Labs report, are you, sir, about any MarkMonitor system other
5 than the one that you looked at and considered that's
6 referenced in the Harbor Labs report, correct?

7 A. Correct.

8 Q. Not here to talk about, didn't report on the reliability
9 or accuracy of any other product, service, configuration that
10 MarkMonitor has ever put into the world?

11 A. Correct.

12 Q. Do you understand -- we looked at the beginning of the
13 Harbor Labs report and it talked about CCI, and you understand
14 that was in connection with something called the Copyright
15 Alert System?

16 A. Yes.

17 Q. And do you understand, sir, that the Copyright Alert
18 System was a program jointly run by a number of content owners
19 and ISPs, including the movie studios, the Movie Picture
20 Association of America on the one hand and the record companies
21 on the other?

22 A. Yes.

23 Q. And the review and information you considered had to do
24 with verifying content in videos, in movies, correct, in part?

25 A. Yes.

1 Q. And I assume, sir, that you have no knowledge of an
2 independent MarkMonitor system used for a separate record
3 company program?

4 A. Correct.

5 MS. LEIDEN: Objection.

6 THE COURT: Overruled.

7 BY MR. GOULD:

8 Q. I think you were asked some questions in your deposition,
9 sir, do you recall -- or let me ask a different question. You
10 agree that the MarkMonitor testing that you observed in your
11 interactions at that time were consistent with industry
12 practices?

13 If it would help refresh your recollection, I can
14 show you a page in your deposition?

15 A. Can you define "observed" for me?

16 Q. Bear with me for a moment, please.

17 I'll move on. I can't find my spot. Do you
18 disagree, sir, that MarkMonitor's testing that you observed was
19 consistent with industry practices, as you've previously
20 testified?

21 A. I'm not sure what you mean by "observed."

22 Q. Do you agree that MarkMonitor's testing was consistent
23 with -- excuse me, do you agree that the testing that
24 MarkMonitor did, as described to you, was consistent with
25 industry practices?

2173

1 A. I'm struggling to answer this in a way that doesn't say
2 more than I want to, because there are many, many industry
3 practices, some good and some bad.

4 Q. You think, you think additional testing may be beneficial,
5 but didn't you agree in your deposition, sir, that their
6 testing was in line with industry practices?

7 A. Oh, in part.

8 Q. And in that regard, you commonly recommend additional
9 testing of systems that you review; isn't that correct?

10 A. Yes.

11 Q. And, in fact, it's not uncommon -- in fact, you've seen
12 many systems work exactly as intended even though additional
13 testing may be recommended?

14 A. Yes.

15 MR. GOULD: If we could please pull up DX 153? It's
16 already in evidence. DX.

17 BY MR. GOULD:

18 Q. Sir, I believe you said you left in late 2013, correct?

19 A. Yes.

20 Q. And there's a document in front of you. Do you recall
21 seeing -- having access to MarkMonitor's response to the Harbor
22 Labs report at the time that you were still at Harbor Labs?

23 MS. LEIDEN: I have an objection to that. I don't
24 believe this document is in evidence.

25 MR. GOULD: Oh, can you please pull it down? I

1 think --

2 THE COURT: Okay. Thank you.

3 MR. OPPENHEIM: It's in evidence.

4 MR. GOULD: I believe it is with Mr. Bahun from
5 MarkMonitor.

6 THE COURT: Is it in?

7 MR. OPPENHEIM: I believe it was moved into evidence
8 and accepted by the Court during Mr. Bahun's testimony.

9 THE COURT: Do you have it in? All right. We have
10 it as admitted. All right.

11 MS. LEIDEN: Thank you, Your Honor.

12 THE COURT: Sure.

13 BY MR. GOULD:

14 Q. Dr. Monson, you didn't see MarkMonitor's written response
15 to the Harbor Labs report at the time, 2013-'14, did you?

16 A. No.

17 Q. Okay. I want to show you some of the language that
18 MarkMonitor provided in response to this report, and let's
19 focus on the first recommendation: Harbor Labs should extend
20 the testing, including more thorough end-to-end testing.

21 Let's look at MarkMonitor's response. If you could
22 blow that up, please, Mr. Duval?

23 MarkMonitor responded: We regularly review our
24 existing unit test coverage to determine the adequacy for all
25 areas of the system. In addition, we currently perform

1 scheduled periodic whole-system tests in a controlled
2 environment to measure all aspects of the system with positive
3 and negative input. This testing process is also reviewed
4 regularly to investigate any opportunities for improvement.

5 Do you recall your report and testimony said you
6 thought that it had been reported to you or you believed that
7 MarkMonitor's whole-system testing was ad hoc, correct?

8 A. Correct.

9 Q. And this -- MarkMonitor here has stated that it performs
10 scheduled whole-end testing, correct?

11 A. That's what I'm seeing, yes.

12 Q. We can put that down. Actually, you know what? Let's
13 take a look at the other recommendations.

14 In the next one, Harbor Labs recommended verifying
15 that content is infringing by having a human review all newly
16 identified content. Do you understand, sir, that the record
17 company verifications of content occurred in an automated
18 basis, not a manual basis?

19 A. I don't remember.

20 Q. Okay. We can move on past that one.

21 Dr. Monson, notwithstanding the recommendations that
22 you made, I want to take a look at the findings of the report.

23 If we could pull up DX 89? Page -- let's start at
24 page 4. Actually, you know what? Let's just go to page 1, and
25 pull up paragraph starting with "As described."

1 And, sir, ultimately, Harbor Labs, with your
2 contributions, concluded that it found MarkMonitor's AntiPiracy
3 system is designed to correctly identify file sharing without
4 generating false positives, correct?

5 A. Yes.

6 Q. And that it undergoes testing to increase confidence in
7 the implementation of the design, correct?

8 A. Yes.

9 Q. And generates thorough case data for alleged infringement
10 tracking, correct?

11 A. Yes.

12 MR. GOULD: Thank you. No further questions.

13 THE COURT: Any redirect?

14 MS. LEIDEN: Yes, very briefly.

REDIRECT EXAMINATION

16 BY MS. LEIDEN:

17 Q. Dr. Monson, earlier in response to a question from
18 Mr. Gould, I believe you said that the MarkMonitor system was
19 consistent with industry standards in part. Do you recall
20 that?

21 A. Yes.

22 Q. What did you mean by "in part"?

23 A. If I may correct, industry practice, not standards.

24 Q. Yes. Thank you.

25 A. By "in part," I mean that, if I understood the implication

1 correctly, it was that this is commonly done in the industry
2 this way and accepted practice, and that is true for the unit
3 testing as in the report. The report also says that it's not
4 so true for the whole-system testing.

5 Q. And Mr. Gould had asked you a question regarding a
6 document that reflected apparently MarkMonitor's responses to
7 the Harbor Labs report. Do you recall that?

8 A. Yes.

9 Q. Do you have any information about the basis for
10 MarkMonitor's responses?

11 A. No.

12 Q. Had you ever seen that document before?

13 A. No.

14 Q. And finally, Mr. Gould had referenced the design of the
15 MarkMonitor system on that first page of the report. Do you
16 recall that?

17 A. Yes.

18 Q. If something is designed to be accurate, it doesn't
19 necessarily mean that it is accurate, correct?

20 A. That's correct.

21 MS. LEIDEN: No further questions.

22 THE COURT: All right. May Mr. Monson be excused?

23 MS. LEIDEN: Yes, Your Honor.

24 THE COURT: All right. Thank you. Thank you.

25 You're excused at this time, Mr. Monson. Please don't relate

1 your testimony to -- discuss your testimony with anyone until
2 our trial is over. All right, sir?

3 THE WITNESS: Thank you. Yes.

4 THE COURT: All right. Thank you. Have a good
5 afternoon.

6 WITNESS EXCUSED

7 THE COURT: All right. Next witness?

8 MR. BRODY: Cox calls Dr. Nick Feamster, Your Honor.

9 THE COURT: Okay.

10 MR. BRODY: I have an answer to the question that
11 came up during the break. Would you like --

12 THE COURT: Let's come to the sidebar then, yes, sir.

13 NOTE: A sidebar discussion is had between the Court
14 and counsel out of the hearing of the jury as follows:

15 AT SIDEBAR

16 THE COURT: Yes, sir.

17 MR. BRODY: So the question that came up was whether
18 Dr. Feamster talked about essentially fabricating a hash value
19 during his deposition.

20 THE COURT: Yes.

21 MR. BRODY: I went back and reread the deposition,
22 and I apologize for having been a philosophy, not a computer
23 science, major. What I think he said in the deposition and
24 what I expect him to testify on the bench was that the peer
25 will misrepresent whether it has a bitfield, and what that

1 means is it's misrepresenting whether it has that portion of
2 the file with that hash.

3 THE COURT: Okay.

4 MR. ZEBRAK: What I said before, Your Honor, was
5 accurate. I still stand by it. I've quoted the transcript
6 accurately. He's now interpreted what Dr. Feamster apparently
7 meant, as he clarified in his deposition, not what he put in
8 his report, and it's just -- it's constant mission creep here.

9 MR. BRODY: The question -- we'll get the questions.
10 The questions were all under what circumstances does the -- or
11 is it likely or does it happen that the peer is misrepresenting
12 what it has. And then he gave lots of testimony about that,
13 and then he talked about how it would misrepresent the bitfield
14 as a way of doing it. That is the mechanism by which it
15 misrepresented what it had, and that's what the deposition
16 said.

17 THE COURT: He can go as far as he went in his
18 deposition, but to go beyond that to explain what he meant
19 when -- what was in the deposition is not going to be
20 permitted.

21 MR. BRODY: That's --

22 THE COURT: And it doesn't give notice to Sony as to
23 what his underlying, you know, reasoning is, and it's outside
24 of the expert report to begin with, and so I won't allow that.

25 MR. BRODY: I appreciate that.

1 THE COURT: Okay. So you focus your questions so you
2 try and make sure he doesn't go there. Do your best.

3 MR. BRODY: I will do my best.

4 MR. ZEBRAK: Your Honor, can I ask for one
5 clarification?

6 THE COURT: Yes.

7 MR. ZEBRAK: I know Mr. Brody is now aware of the
8 limits on what we've agreed upon, but do we have an
9 understanding about whether Dr. Feamster is aware of these?
10 Because I don't want to have any hiccups where he works things
11 out from the stand.

12 THE COURT: Yeah.

13 MR. BRODY: I told him -- I told him that he was
14 restricted to what's in his deposition. I told him he should
15 not be volunteering anything about quantitative -- the
16 quantitative extent of lying. He did give testimony --
17 qualitative testimony about that. He said it was quite likely.
18 And I will ask him that.

19 You know, if Mr. Zebrak wants to ask him what "quite
20 likely" means, I'm sure he'll answer the question, but that's
21 at Mr. Zebrak's choice.

22 THE COURT: Okay. All right. So you've spoken to
23 him about the rulings we've made here.

24 MR. BRODY: Yes.

25 THE COURT: And you'll do the best you can to guide

2181

1 him that way.

2 MR. BRODY: We will, and I think he understands.

3 THE COURT: Okay. All right.

4 MR. ZEBRAK: Does that include what we said is off
5 limits before we --

6 THE COURT: All right, let's go. Let's go.

7 MR. BRODY: I'm not going to ask him about that
8 stuff, sir.

9 NOTE: The sidebar discussion is concluded; whereupon
10 the case continues before the jury as follows:

11 BEFORE THE JURY

12 NICK FEAMSTER, PH.D., DEFENDANTS' WITNESS, SWORN

13 MR. BRODY: Are you guys good?

14 MR. GOULD: Yes, sir.

15 DIRECT EXAMINATION

16 BY MR. BRODY:

17 Q. Hi, Dr. Feamster.

18 A. Hi there.

19 Q. Could you state your name for the record and please spell
20 your last name for the court reporter?

21 A. Yes. It's Nick Feamster, F-e-a-m-s-t-e-r.

22 Q. And do you have a general understanding of why you're here
23 today and what you're going to be testifying about?

24 A. Yes, I do.

25 Q. What is that?

1 A. I've been asked to render my opinion on certain technical
2 matters in this case.

3 Q. I'd like to get into those opinions, but first I think we
4 ought to spend a little time explaining to the jury what your
5 background is and why you're going to be offering those
6 opinions. So can I ask you to turn in your binder to the tab
7 that's labeled 152?

8 A. I'm there.

9 Q. Okay. What is Defendants' Exhibit 152?

10 A. That is a version of my CV.

11 Q. And what is your CV?

12 A. A CV is basically a version of a résumé that an academic
13 researcher typically maintains that contains a record of all my
14 work.

15 MR. BRODY: Your Honor, we'd move the admission of
16 Exhibit 152.

17 THE COURT: Any objection?

18 MR. ZEBRAK: No objection, Your Honor.

19 THE COURT: Received.

20 MR. BRODY: Can we publish that to the jury?

21 THE COURT: Yes, sir.

22 BY MR. BRODY:

23 Q. How long does this CV run, sir? How many pages?

24 A. It's 34 pages.

25 Q. Okay. Have you prepared some slides to assist in your

1 testimony today?

2 A. Yes, I have.

3 Q. Okay. And does one of those slides pick out some of the
4 highlights of that résumé?

5 A. Yes, it does.

6 Q. Okay. Could we put those slide up, please? And let's go
7 to the second slide.

8 Is this the one that summarizes your, your
9 background?

10 A. That's the one.

11 Q. Okay. So where did you go to school, sir?

12 A. I received three degrees from the Massachusetts Institute
13 of Technology.

14 Q. Which degrees did you receive from that school?

15 A. I received a Bachelor's Degree in Electrical Engineering
16 and Computer Science, and I received a Master's Degree in
17 Electrical Engineering and Computer Science, and finally I
18 received a Ph.D. in Computer Science.

19 Q. Okay. And where do you work currently?

20 A. I'm glad you brought that up because it's updated since
21 the CV that was entered. I now am a chaired and tenured
22 professor in the computer science department at the University
23 of Chicago.

24 Q. Okay. And where were you working when the CV was
25 prepared?

1 A. I was a full professor in the computer science department
2 at Princeton University.

3 Q. So you just moved from Princeton to Chicago recently?

4 A. Just over the summer for the weather.

5 Q. Okay. That was a big mistake. And I say that as a
6 Chicagoan.

7 You -- how long have you -- when did you get your
8 Ph.D.?

9 A. 2005.

10 Q. Okay. And you've been teaching and doing research and
11 scholarships since then?

12 A. Since before then, in fact.

13 Q. Okay. Have you -- are you a member of any professional
14 organizations in your field?

15 A. Yes, I am.

16 Q. Okay. I think Ms. Frederiksen-Cross mentioned that she
17 was a member of an organization called CAM. Are you familiar
18 with that organization? Sorry, ACM.

19 A. The ACM, the Association of Computing Machinery. Yes, I
20 know it well.

21 Q. Okay. Are you a member as well?

22 A. I am a member. Pretty much anyone can join. You could
23 join if you wanted to.

24 Q. Have you had any -- received any honors from that
25 organization?

1 A. Yes, I have. I was named a fellow of the ACM.

2 Q. And what is a fellow of the ACM?

3 A. A fellow is typically reserved for the top 1 percent of
4 all computer scientists in the field.

5 Q. And who makes that determination?

6 A. The association does. That's basically determined by a
7 panel of other computer scientists, essentially peers.

8 Q. Do you do any writing for their publications, ACM's?

9 A. Absolutely. All the time.

10 Q. Ms. Frederiksen-Cross mentioned an organization that she's
11 a member of called IEEE. Are you a member of that
12 organization?

13 A. I am not. That's primarily an electrical engineering
14 organization, although they do have some computer science
15 publications.

16 Q. Have you ever been a member?

17 A. Some time ago I was. When I was doing my electrical
18 engineering studies, I was.

19 Q. And when you were a member, did you have any -- what kind
20 of activities did you participate in?

21 A. Well, it's interesting that you mention that, because you
22 don't need to be a member to participate in certain types of
23 activities. So, for example, one of the top security --
24 computer science security conferences is organized by the IEEE,
25 and I've published there in the past. I continue to publish in

1 that because it's a computer security journal, so -- even
2 though you're -- you don't have to be a member to publish in
3 these journals.

4 Q. Do you write regularly for the journals of the IEEE?

5 A. The computer security ones, yes, I do.

6 Q. Okay. While we're talking about publications, is there a
7 list of your publications in the -- in Exhibit 152?

8 A. There is.

9 Q. Do you know how many publications you have listed there?

10 A. I haven't counted in a while. And I've published since,
11 since this particular document, but it's, it's somewhere
12 between 150 and 200 peer-reviewed publications.

13 Q. What do you mean by "peer review"?

14 A. Generally in academic research, you can't just write a
15 document and, you know, throw it up on the internet, or I
16 couldn't just give something to you and say, here it is.

17 In order to publish in an academic journal, we have a
18 process called peer review, which is kind of like what it
19 sounds. You write, you write a research paper describing the
20 work that you did. You submit it for review.

21 And there's a process by which other researchers in
22 the field, they may be other academic researchers, they may be
23 other people in industry, etc., but essentially they're peers,
24 experts in the area, and they determine whether or not this is
25 worthy of publication.

1 Q. And does everything that gets submitted into a
2 peer-reviewed journal get published?

3 A. No. Typical acceptance rates at the journals that we're
4 looking at here, I think, are actually published in my CV, but
5 the top journals and conferences, the acceptance rates run at
6 about 10 or 20 percent. So 20 is a standard number for the
7 best journals and conferences.

8 Q. Have any of your peer-reviewed publications been awarded
9 any honors?

10 A. Yes, they have. I think there's a summary of those on the
11 second page.

12 Q. Okay. What kind of honors have they received?

13 A. A number -- I think there's a couple of different types of
14 awards that papers receive. Best Paper Award is something that
15 again a peer -- the peer review process decides to confer on
16 certain publications.

17 There's also another award that I've received for at
18 least one of my pieces of work called a Test of Time Award,
19 which means essentially the work was done a certain time ago,
20 typically a decade ago or more, and at some point, our
21 community of peers determines that, yes, that work you did was
22 not only good then; it's still good. You know, it's had a
23 significant impact on the field. So I've received that award
24 as well.

25 Q. Have you written any books?

1 A. I have written some book chapters. Those are, those are
2 outlined in my CV. And forthcoming, I am a coauthor on the
3 next edition of the Computer Networks textbook by Tanenbaum,
4 which is essentially one of the, one of the predominant
5 computer networking textbooks that's used around the world.

6 Q. How about software? Do you have any experience with
7 software?

8 A. Yes.

9 Q. What's your experience with software?

10 A. I, I write it frequently. I think my CV also talks about
11 some of the software that I have both written and also
12 supervised other students on having written, and I regularly
13 write software as part of my job.

14 Q. Have any of your programs been released for use by others?

15 A. Yes.

16 Q. How many?

17 A. I don't know exact count, but it's probably on the order
18 of ten-ish, maybe more. I keep track of the highlights ones.
19 There have been some that have been quite widely used.

20 Q. Okay. And then the last thing I wanted to ask you about
21 is your experience with some of the industries and technologies
22 we're talking about today.

23 A. Sure.

24 Q. So have you done any research regarding peer-to-peer
25 networking?

1 A. I have.

2 Q. Can you describe that research?

3 A. Sure. One of the, one of the pieces of work that I did
4 was back in the mid-2000s, looking at essentially the
5 incentives in BitTorrent, peer-to-peer file sharing, and the
6 incentives that peers have to share certain parts of the file
7 or not share certain parts of the file. So we looked at some
8 of the deficiencies in the, in the protocol and ways to address
9 those.

10 Q. And was that work published?

11 A. It was.

12 Q. In a peer review journal?

13 A. In a peer review journal, yes.

14 Q. Have you done any research or consulting regarding digital
15 fingerprinting?

16 A. Yes, I have.

17 Q. Can you describe that briefly?

18 A. Right. So it's important to note that that work was not
19 peer reviewed, but I did some consulting work on audio-based
20 digital fingerprinting technology quite recently, in fact.

21 Q. Okay. Have you done any consulting or research concerning
22 cable broadband networks?

23 A. Both consulting and research, yes.

24 Q. Okay. And who's funded -- who has funded that research?

25 A. I would say about 80 percent of the, the research that I

2190

1 do is funded by the National Science Foundation, which
2 essentially all of you are paying for it through your tax
3 dollars. Another fairly significant portion of my research is
4 funded by an organization called DARPA, which is the research
5 arm of the Defense, Department of Defense.

6 Also -- oh, you were asking about industry, I
7 believe. So in industry, some of the groups that have funded
8 my work include the ISPs, Comcast. They run something called
9 the Tech Research Fund. I work quite closely with Comcast on a
10 number of issues. Google, also I've worked with Google on a
11 number of issues. They funded my work.

12 CableLabs is -- you may not have heard of CableLabs
13 necessarily, but they are essentially the R&D wing, if you
14 will, of the cable industry. They basically developed the
15 technology and standards that go into basically every cable
16 modem that we have.

17 Q. I see you have Cisco on here. Have you worked with them?

18 A. I have, both in a consulting and a research capacity.

19 Q. And is that a networking company as well?

20 A. Yes, it is.

21 Q. Have you ever testified at trial before?

22 A. No. I'm a rookie.

23 Q. Okay. Have you ever worked as an expert in a lawsuit?

24 A. Yes, I have.

25 Q. How many times?

1 A. Between five and ten.

2 Q. And then finally, are you getting paid for your work on
3 this case?

4 A. Thankfully, yes.

5 Q. How much? What's your rate?

6 A. \$450 an hour.

7 Q. And how many hours have you worked?

8 A. About 200.

9 Q. So about \$90,000?

10 A. That's about right.

11 Q. You've heard -- you've been here for some of the
12 testimony; is that right?

13 A. I sure have.

14 Q. And have you read a transcript of other portions of the
15 testimony?

16 A. Yes, I have.

17 Q. Do you feel comfortable testifying about the technical
18 issues that have been presented during the course of the trial?

19 A. For the testimony that I've heard, yes, or read, yes.

20 Absolutely.

21 Q. Why do you feel that way?

22 A. For a number of reasons. One, I think as we've been going
23 through, I've essentially worked in the field of computer
24 networking for my entire professional career. Peer-to-peer
25 networking, of course, is the topic of this particular case.

1 That's basically one aspect of my general area of knowledge,
2 but I obviously have studied that extensively as well.

3 I've kept up with the research in this area, and
4 also, I've done a lot of work in the industries for which this
5 material pertains.

6 MR. BRODY: Your Honor, I would tender Dr. Feamster
7 as an expert in the analysis of computer software,
8 computer-generated data, computer networking, cable data
9 networks, and peer-to-peer networking.

10 THE COURT: All right. Any objection?

11 MR. ZEBRAK: Your Honor, I'd first ask for Mr. Brody
12 to repeat that. It went a little fast for me.

13 MR. BRODY: Computer software, computer-generated
14 data, computer networking, cable data networks, and
15 peer-to-peer networking.

16 MR. ZEBRAK: May we approach, Your Honor?

17 THE COURT: Yes, sir.

18 NOTE: A sidebar discussion is had between the Court
19 and counsel out of the hearing of the jury as follows:

20 AT SIDEBAR

21 MR. ZEBRAK: So there -- I have no objection to an
22 expert on computer networking and computer software, but I
23 don't believe his -- that he's an expert on computer-generated
24 data. I think that was one of them that -- which I just think
25 there's no foundation for that.

1 I think he's -- you know, predominantly, Your Honor,
2 his experience is in computer networking and secondarily
3 computer software, but the data portion, I think there's no
4 foundation for that.

5 MR. BRODY: I think it was the -- I meant it to be
6 the analysis of computer software and computer-generated data.
7 I'll lay some more foundation if you want.

8 THE COURT: No, I mean, he's -- what about the cable
9 networking? Is that relevant to this case?

10 MR. BRODY: Yeah. We're talking about cable
11 networks. These are -- the Cox network is a cable data
12 network.

13 THE COURT: Right. Is he going to get into the --

14 MR. BRODY: He's not going to be testifying about
15 the, you know, the intricacies of the cable system, but I just
16 wanted to be sure that there would be no question about his
17 ability to opine about how the Cox network functions and, you
18 know, how people connect to one another in --

19 THE COURT: At a higher level?

20 MR. BRODY: Yeah, yeah, yeah.

21 MR. ZEBRAK: And I apologize, Your Honor, I know I
22 asked for him to repeat it once, but are you using the term
23 "P2P" for any of his expertise with regard to computer
24 software?

25 MR. BRODY: I asked peer-to-peer networking.

1 MR. ZEBRAK: Yeah, see, Your Honor, I don't -- he's a
2 computer networking, computer scientist, and he has a
3 familiarity, a deep familiarity with computer software, but I
4 think there's no foundation for him being an expert on P2P and
5 certainly not computer-generated data.

6 MR. BRODY: He's done research in the field. He's
7 published in the field. We think he's competent.

8 THE COURT: And he's indicated that he's kept up with
9 peer-to-peer and read materials and considers himself an
10 expert. Your exception is noted. I'm going to allow him to
11 testify.

12 MR. BRODY: Thank you, Judge.

13 NOTE: The sidebar discussion is concluded; whereupon
14 the case continues before the jury as follows:

15 BEFORE THE JURY

16 THE COURT: All right. He'll be permitted to testify
17 in the areas that you've identified. As long as you don't get
18 too long-winded about it, we'll be just fine.

19 MR. BRODY: That'll be a challenge for me, Your
20 Honor, but I'll do my best.

21 THE COURT: That was a preemptive strike.

22 (Laughter.)

23 MR. BRODY: Well aimed.

24 BY MR. BRODY:

25 Q. Dr. Feamster, did you prepare a slide that outlines the

2195

1 topics that you intend to cover -- expect to cover in your
2 testimony?

3 A. Yes, I did.

4 Q. Can we have the next slide, please?

5 So what topics do you expect to discuss?

6 A. All right. So I plan to talk about what I investigated
7 for this matter, the materials that I reviewed in connection
8 with this -- with my investigation for this case. I'll
9 summarize my opinions and the basis for those opinions.

10 Q. Okay. Well, let's start at the beginning.

11 Can we go to the next slide?

12 What did you investigate?

13 A. Right. So the central question that I was looking at in
14 this matter was whether MarkMonitor had a system that reliably
15 determined whether Cox subscribers were sharing copies of
16 plaintiffs' works, whether the version of software they used in
17 this case did that.

18 Q. What do you mean by that? So what does it -- what --
19 excuse me. We'll get to these in detail.

20 A. Sure.

21 Q. So let's go the second topic. What materials did you
22 review? Have you got a slide that summarizes that?

23 A. I do. The highlights.

24 Q. Okay. What are the highlights?

25 A. Okay. So these are the highlights. So we -- I looked at

1 a variety of material that described the capabilities of the
2 MarkMonitor software, okay. So some of those we've seen
3 earlier today and earlier in the trial, both the MarkMonitor
4 and Audible Magic technical documents that described how their
5 systems were used in the Copyright Alert Program or System, the
6 Harbor Labs and Stroz Friedberg audits of the MarkMonitor
7 system for that Copyright Alert Program.

8 I also looked at the source code for MarkMonitor, the
9 MarkMonitor system, as well as the source code for the Audible
10 Magic digital fingerprinting system, and I've listened to a
11 variety of testimony at trial.

12 I should mention that I obviously haven't listened to
13 Rubin since we haven't heard from him yet, but I have either
14 listened to or read the transcript of all of the other
15 testimonies that are listed here.

16 A second class of things I looked at were materials
17 that allowed me to determine what MarkMonitor was actually
18 doing in this matter to detect infringement on the Cox network.
19 Okay. So I was provided with more than 170,000 so-called
20 evidence packages or evidence files that MarkMonitor assembled
21 in connection with this case. I was also provided with a hard
22 drive that had upwards of about 40,000 audio recordings, and
23 also have listened to the testimony and read some of the
24 testimony that I described.

25 Q. The 170-odd-thousand evidence packages, the jury has heard

1 testimony about some spreadsheets that the folks at MarkMonitor
2 compiled on some of these issues.

3 A. Yep.

4 Q. What's the relationship between those spreadsheets and the
5 evidence packages that you looked at?

6 A. There were a number of spreadsheets. There was a notice
7 spreadsheet, there was a spreadsheet that described the
8 contents of the hard drive, and there was a spreadsheet
9 describing the Audible Magic fingerprints.

10 Q. Okay.

11 A. Okay. So these were derivative of what we're talking
12 about here.

13 Q. Okay. So you went and looked at the underlying data; is
14 that what you said?

15 A. That's correct.

16 Q. And with all of that by way of introduction, can you give
17 us a short summary of the opinions you expect to testify to?

18 A. Yes, I can.

19 Q. What, what would that summary be?

20 A. The version of the MarkMonitor system that was used in
21 this matter routinely failed to verify what was in the files on
22 the computers of Cox's subscribers. It's my opinion that
23 there's no reliable evidence that the Cox subscribers were
24 sharing copies of plaintiffs' works based on the evidence I've
25 seen.

1 Q. Okay. Let's zero in on that word, "verify."

2 Can we have the next slide?

3 Why is it important -- why was it important for
4 MarkMonitor to verify what it found on the computers of the Cox
5 subscribers?

6 A. Yeah, there's two aspects to verification. One is --
7 first of all, needed -- needs to determine if it has a -- you
8 know, given if it had a complete copy of a file, it needs to
9 know what that file is or represents, right?

10 So there's an aspect to verification that says, is
11 this file one of the works? Okay. So --

12 Q. And the "it" here, is that MarkMonitor?

13 A. That's --

14 Q. Can we go back, please?

15 A. That's right.

16 Q. And what's the second aspect of verification?

17 A. So as I mentioned, the first aspect basically just says,
18 what is this file? Let's check that.

19 The second aspect says, what is a peer in a
20 peer-to-peer network actually doing? Is it sharing that file
21 all -- in all -- all or in part, right?

22 Q. Okay.

23 A. So first relates to the content; second relates to what is
24 a peer doing or not doing.

25 Q. Okay. And I gather you concluded that the verification

1 was not sufficient in this case; is that right?

2 A. That's what I said, yes.

3 Q. Can we see the next slide, please?

4 What did you -- what conclusion did you draw from the
5 deficiencies in the verification process?

6 A. Because the verification process was deficient, right,
7 essentially because they didn't adequately verify what was
8 going on, there's no reliable evidence that the Cox subscribers
9 actually were sharing copies of the plaintiffs' works.

10 Q. Okay. And the verification we're talking about here,
11 that's verification of what was going on on the subscribers'
12 computers, right?

13 A. That's correct.

14 Q. Okay. So with all that by way of prelude, can you briefly
15 summarize the basis for your -- the opinions that you reached?

16 A. Yes.

17 Q. Next slide, please.

18 What -- how are you going to do that?

19 A. Right. So before we get into the details there, what I
20 need to do is lay some groundwork and talk a little bit about
21 how peer-to-peer networks operate, and I'm going to do that in
22 the context of BitTorrent. Okay?

23 Q. Okay.

24 A. Then what we're going to do, given that basic
25 understanding, is talk about the general capabilities of the

2200

1 MarkMonitor system, some of which we've heard about a little
2 bit at trial as well, but how basically it operated in the
3 context of the Copyright Alert System.

4 Q. Okay.

5 A. And then by way of contrast, I should say, we'll talk
6 about how it operated in the context of this trial.

7 Q. So let's start with the operation of peer-to-peer
8 networks.

9 Can we have the next slide, please?

10 What's the -- what's illustrated on this slide?

11 A. Right. So here we have a cartoon picture of the internet.
12 It's a little bit more complicated than this, but the main
13 thing to -- that I want to point out here is that while, you
14 know, it's sort of common to think in colloquial terms of the
15 internet as, you know, one homogenous thing, it's actually not
16 that at all.

17 Internet actually comes from the word "internetwork,"
18 okay, meaning that there's actually tens of thousands of
19 independently operated networks that connect to form the
20 internet, upwards to 70,000 now, I think, all around the world.
21 Cox is but one of those.

22 So when you transfer a file on the internet, as the
23 animation is showing, your data actually might start in the Cox
24 network but end up somewhere, somewhere completely different in
25 a totally different network.

2201

1 Q. How does the internet relate to peer-to-peer networking?

2 A. Good question. So in the context of a peer-to-peer
3 network, the peers in a peer-to-peer network like BitTorrent
4 are going to be located all around the internet, all right, so
5 not just all on the Cox network. There might be one peer on
6 the Cox network. There may be other peers in other parts of
7 the, of the internet.

8 Q. Okay. Can we -- have you got a slide that illustrates
9 that?

10 A. Yes.

11 Q. Can we see the next slide, please?

12 What does this slide show?

13 A. Right. It shows what I just described, and then we're
14 going to get into a little bit more detail. You can see here
15 peer 1 is sitting in the Cox network, and then we've basically
16 got a bunch of other peers in that peer-to-peer network. In
17 BitTorrent parlance, we'd call this a swarm.

18 So these are all peers who would like to exchange or
19 obtain copies of a particular file. This one, for the sake of
20 illustration is, in deference to Mr. Zebrak, a good song, "Lean
21 on Me," Bill Withers, and in this particular case, what we're
22 seeing is the peer says, I'm interested in, you know, getting a
23 copy of, you know, "Lean on Me."

24 Q. Okay. Before we --

25 A. Yes.

2202

1 Q. -- start downloading music --

2 A. Sure.

3 Q. -- let me just ask you some questions to orient us with
4 respect to the network.

5 First of all, are you going to talk about a
6 particular type of network for the most part in your testimony?

7 A. We'll focus mostly on BitTorrent for the sake of examples
8 here.

9 Q. Okay. And the jury's heard about three other peer-to-peer
10 networks: Ares, Gnutella, and eDonkey.

11 A. That's right.

12 Q. For purposes of your testimony today, how do those differ
13 from BitTorrent?

14 A. There are some differences. I think for the purposes of
15 today, we can think of them as substantially the same.

16 Q. Okay. Now, in this illustration, one of the peers has a,
17 what I take it is a complete copy of "Lean on Me," and one has
18 nothing, and three have portions of the file. What does that
19 illustrate?

20 A. That is -- that's what we're seeing. Okay. So basically,
21 this is pretty fundamental to the operation of BitTorrent, and
22 this is one of the differences, right, is that BitTorrent,
23 actually, the peers exchange pieces or chunks. In Ares and
24 Gnutella, I believe they exchange entire files.

25 Q. Okay.

2203

1 A. Here the idea is that all these peers eventually want to
2 get a complete copy. Only one in this case, peer 4, has that
3 complete copy. It's called a seeder. Okay?

4 But in order for everybody to get the copy, they have
5 to trade pieces. Obviously, if we're going to trade, I need to
6 have something you don't have, and you need to have something I
7 don't have. So there are some strategies that -- and aspects
8 of the design of BitTorrent that kind of make it all work out,
9 but generally speaking, this is sometimes referred to as tit
10 for tat.

11 Q. What -- you said that tit for tat creates some incentives.
12 What's the incentive that tit for tat creates?

13 A. It's a good question. So this is, this is really
14 important, right? Because in order for me to download pieces
15 of a file that I want, I have to have pieces that somebody else
16 wants. If you can see, there's a bootstrapping problem here,
17 right? If you start out with nothing, I've got a problem.

18 Now, BitTorrent has some ways to get around that
19 particular corner case, but generally speaking, we're trading,
20 and so I have incentives to basically say that I have certain
21 pieces of a file that you want, all right?

22 So, Mike, if you have a piece that -- if you're
23 looking for a piece and I'm looking for a piece that you have,
24 I might say, I've got that piece.

25 Q. Are you familiar with the concept of a bitfield in

2204

1 BitTorrent?

2 A. Yes.

3 Q. Okay. And can you -- can a peer use the bitfield to
4 advertise that it has a piece of a file?

5 A. That's, that's generally the mechanism that it uses to do
6 so.

7 Q. Okay.

8 A. In fact, we sort of see a version of that here on, on the
9 slide itself.

10 Q. Okay.

11 A. You can see -- yeah.

12 Q. So let's go back to our peer who's been -- had his
13 question lingering. What, what is the peer doing, peer 1 doing
14 at this point?

15 A. At this point, peer 1 doesn't have any of the file, so
16 peer 1 is trying to determine who has pieces of this file,
17 "Lean on Me," okay? So what it's going to do is basically ask
18 something called a tracker.

19 Q. Okay. How does it -- who does peer 1 direct that -- how
20 does peer 1 find out who has the pieces of the file?

21 A. That's, that's a good question. So there are two steps to
22 that. The first thing it has to do is actually get something
23 called a torrent file, and it's got to search the internet for,
24 for the torrent file. Okay.

25 Once it has the torrent, the torrent file is going to

2205

1 point that peer towards something called a tracker, okay? The
2 tracker basically is a machine on the internet shown on the
3 right side of this slide that keeps track of the other peers in
4 the so-called swarm that are supposed to have pieces of that
5 file. It's also keeping track of essentially the information
6 that we see right there on the -- in the graphic.

7 Q. Okay. And does the tracker send that information to the
8 peer requesting it?

9 A. That's right.

10 MR. BRODY: Can we click again, please? There it is.

11 BY MR. BRODY:

12 Q. What's the next step in this process?

13 A. Okay. So at this point, peer 1 has learned from, from the
14 tracker which peers have which pieces. Now, what this
15 illustration isn't showing is that, that swapping that I just
16 described, of course, that's important, but for the sake of
17 illustration, we're just looking at the download half.

18 Through that process that I described, the peer
19 begins to accumulate and assemble pieces or chunks. If I use
20 the word "chunks," I mean pieces, same things. Pieces or chunk
21 of that file, begins to assemble them. As those pieces come
22 in -- yeah, please.

23 MR. BRODY: Can we click again?

24 BY MR. BRODY:

25 Q. What happens when the pieces come in?

1 A. As those pieces come in, the peer is going to check
2 whether or not that piece that it just downloaded from some
3 other peer on the internet is actually a piece of the file that
4 it thinks that it's getting. So this is the verification that
5 we actually just heard about in the Harbor Labs testimony.

6 Q. And we got three checks and an X. What is the X supposed
7 to indicate?

8 A. The X would indicate that a peer did this check and that
9 the check failed.

10 Q. Okay.

11 A. And at that point, the peer would determine, okay, this
12 chunk of content that I just received actually isn't part of
13 the file that I'm seeking, the thing that the peer just sent me
14 isn't going to be useful for reassembling this, so at that
15 part -- at that point, it will discard that piece and try to go
16 find that piece from some other peer in the swarm.

17 MR. BRODY: Okay. Can you click again, please? And
18 there it goes.

19 BY MR. BRODY:

20 Q. Now, let me ask you a couple of questions about this
21 checking process.

22 A. Yes.

23 Q. First of all, what is a consistent -- what is the peer
24 doing to check the piece?

25 A. Good question. So there's a couple of pieces to that

2207

1 check -- sorry, a couple of aspects to that check. There's a
2 check on the individual piece that we saw, and then there's
3 also a check on the whole file, okay?

4 So this process is done -- I'm sorry, this check is
5 done through a process called hashing. We sometimes call it
6 computing the hash. And the word "computing" is also quite
7 important, right? The peer that received it needs to compute a
8 hash on the piece it just received.

9 Computing isn't enough, right? Because that's just
10 going to give you a value, right? What the peer is going to do
11 with the result of that computation, that's the SHA-1 hash that
12 we may have heard about, what it's going to do with the result
13 of that computation is compare it against another value, right?
14 That other value is sitting in the torrent file, and so the
15 torrent file contains a list -- for every piece, the torrent
16 file says this is the hash value for that piece, okay.

17 So when the peer basically gets this piece from
18 somewhere else on the internet, says, I don't know what the
19 heck this is. Let me run this hash computation and compare it
20 against what's in the torrent file. If those two things match,
21 boom, we're good. If they don't match, that piece was garbage.

22 Q. And this --

23 A. There's also a hash over the entire file, which is what
24 we're seeing here in the diagram.

25 Q. And this process of computing the hash, does that require

2208

1 actually examining the content of the piece that the peer is
2 receiving?

3 A. Depends on what you mean by the word "examining," but yes,
4 basically what that is is a computation over the contents of
5 that piece.

6 Q. So the peer doesn't simply rely on whatever hash it's been
7 told it would be receiving? It actually verifies that?

8 A. Yeah. The hash by itself actually is meaningless. That's
9 just basically a report of, like, if you find something on the
10 internet, if you want to know that it matches, you know, that
11 piece that you think it is, then perform the computation and do
12 the comparison.

13 Q. Why, why is there any risk? Why, why would it be the case
14 that a peer would get a piece or a file that is not what it
15 purports to be?

16 A. Yeah, that's a good question. There are a whole host of
17 reasons, both benign and not so benign, but this really comes
18 to, to the fundamental operation of how BitTorrent works, which
19 as we talked about, was -- it centers around incentives, all
20 right?

21 So you remember that example I gave before where, you
22 know, Mike and I can only trade a piece if he has something
23 that I want and I have something he wants. Well, what if I
24 want what he has and I don't have anything he wants? Well,
25 then there's a huge incentive for me to basically say, I've got

2209

1 this piece, everybody, Mike, and I'd give you anything. If you
2 don't check it, all bets are off.

3 That's why BitTorrent actually runs the check we just
4 talked about.

5 Q. Okay.

6 A. That's one example. There are a few others, but that's a
7 predominant sample.

8 MR. BRODY: Okay. And can we click the last step in
9 this process?

10 BY MR. BRODY:

11 Q. What is this illustrating?

12 A. So at this point, the peer has basically received all
13 pieces of that file. This is, this is the last piece that
14 basically it's checking against. At that point, it can
15 reassemble the entire file and perform a check over the, over
16 the entire file.

17 Q. Is there any risk of -- are there any other reasons other
18 than dishonesty that you were talking about or the
19 misrepresentation on why it would be important to perform the
20 check, the hash check?

21 A. Sure. Files can be corrupted. I think actually I
22 listened to the Bahun testimony. We heard about a disc
23 corruption case there.

24 Bit errors, there can be errors in transmission.

25 Now, network protocols are supposed to correct for those types

2210

1 of things, but it doesn't always happen. So those are some
2 other, some other possibilities. That's not an exhaustive
3 list.

4 Q. You said, you said that you might want to misrepresent to
5 me what it is that you've got so that I'll trade with you.
6 How, how would you go about doing that?

7 A. Well, it's pretty straightforward. Just in the way that
8 I -- we just did it in human space here. A piece of software
9 could do the exact same thing, basically just say, I've got a
10 piece.

11 Q. And is there software like that available to peers on a
12 network?

13 A. Quite a lot. I guess I should add it's --

14 THE COURT: No, wait for the next question.

15 THE WITNESS: Yes, please. Thank you.

16 MR. BRODY: Can we have the next slide, please?

17 BY MR. BRODY:

18 Q. So we saw this slide before, and you told us before that
19 verification was a key issue for your analysis of the
20 MarkMonitor system. What you've just explained to us about how
21 the peer-to-peer network works and how it checks these pieces
22 as they come in, how does that relate to the overall question
23 of MarkMonitor's verification?

24 A. Yeah, that's a very good question. So let's go -- just
25 bounce back up a level.

2211

1 Remember I was saying that there are two aspects to
2 verification, right? One is like, what are these individual
3 pieces? What is the peer actually sharing with me? Is it what
4 it says it is? So we've talked at length about that.

5 The other is, okay, in that animation, we just
6 watched peer 1 assemble a whole file. Okay. Great, it's got a
7 whole file. What is it? It could be junk, right? So you've
8 got to check that.

9 Now, the SHA-1 hash is there to -- of the entire
10 file, basically says, well, this is what the torrent says it
11 is, right? So there's some torrent file out there that says
12 there's a file with a certain name and, okay, you just
13 downloaded a bunch of bits that correspond to that torrent
14 file. But we still haven't answered a key question, which is,
15 like, is this a work, you know, is this an infringing work, or
16 is it -- it could be anything basically.

17 Q. Okay. And could it be -- okay.

18 Have you prepared a slide that shows kind of the
19 types of ambiguities that can arise when you -- when a peer
20 downloads -- searches for and downloads a file?

21 A. Yes, I have.

22 MR. BRODY: Okay. Can we look at the next slide,
23 please?

24 BY MR. BRODY:

25 Q. Now, there's a work at issue in this case called "Lean on

2212

1 Me," a song by Mr. Bill Withers. You're aware of that
2 generally?

3 A. I've heard the song, yeah.

4 Q. And I think the registration in the case identifies -- we
5 can look at this if you want, but I think the registration in
6 the case identifies it as a work on an album called Still Bill.

7 Okay?

8 A. Okay.

9 Q. If you go out, MarkMonitor goes out into the network or a
10 peer goes out into the network and looks for "Lean on Me" from
11 the Still Bill album --

12 MR. ZEBRAK: Objection, Your Honor. I move to strike
13 because counsel is testifying, and I'm checking it, I'm not
14 sure that's even a work in suit.

15 MR. BRODY: I'll go back through the exhibit if you
16 want me to. It's a work in suit.

17 THE COURT: All right. Why don't -- time for a
18 break. Why don't we take a break. It's 4:00, and we'll take
19 15 minutes, and we'll continue the testimony.

20 NOTE: At this point, the jury leaves the courtroom;
21 whereupon the case continues as follows:

22 JURY OUT

23 THE COURT: All right. So there's been quite a bit
24 of leading questions, and when I'm about to tell you, hey, you
25 know, stop leading now, then you ask a, you know, a what,

2213

1 where, when, how question, and it's not leading, and so we move
2 forward. So let's, let's start again. That was -- the
3 objection is sustained. Let's go back and let's stop asking
4 leading questions, okay?

5 MR. BRODY: Okay.

6 THE COURT: All right.

7 MR. BRODY: I apologize.

8 THE COURT: No, it's quite all right.

9 All right. Anything else before we break?

10 MR. ZEBRAK: Your Honor, just very briefly, I believe
11 that the work counsel was just asking about or explaining to
12 the witness is in the case, but he's testifying that there's an
13 album listed on PX 1. It doesn't list albums, Your Honor.

14 MR. BRODY: No, the --

15 MR. ZEBRAK: And I just -- excuse me, sir.

16 MR. BRODY: I'm sorry.

17 MR. ZEBRAK: And, likewise, we just received the
18 documents -- we're supposed to exchange binders at the start of
19 the day. We just got their binder. There's a document in it
20 that is not on his list of materials considered. I don't know
21 what it's about. It's one of the registration materials, and
22 he hasn't examined any registration materials. So I would
23 object to any use of it.

24 THE COURT: Okay. Talk about it and see if you
25 can --

1 MR. BRODY: Sure.

2 THE COURT: -- get an understanding of what it is,
3 and when we come back, we'll address it if we need to, okay?

4 MR. BRODY: Thank you, Judge.

5 THE COURT: All right. We're in recess.

6 NOTE: At this point a recess is taken; at the
7 conclusion of which the case continues in the absence of the
8 jury as follow:

9 JURY OUT

10 THE COURT: Okay. Where are we?

11 MR. BRODY: I understand counsel has an issue, Your
12 Honor.

13 THE COURT: Yes, sir. Go ahead, Mr. Zebrak.

14 MR. ZEBRAK: May I ask that the witness be asked to
15 leave the courtroom?

16 THE COURT: All right. Yeah, please, go -- head to
17 the hallway. Neophyte.

18 NOTE: The witness leaves the courtroom.

19 THE COURT: Yes, sir.

20 MR. ZEBRAK: Your Honor, this situation just keeps
21 worsening. The document that I raised with Your Honor, it
22 turns out it's a copyright registration.

23 Now, Mr. Brody now tells me at the start of the
24 break, he said he wasn't going to use it -- he said he was
25 going to use it, and now he says he's not going to use it. But

2215

1 it's the context. And even if he now doesn't use it, I still
2 need to explain what's happening here, Your Honor.

3 First of all, he didn't do anything with copyright
4 registrations. This was not a document he has ever seen. We
5 saw it just now.

6 I had raised a concern, Your Honor, about the slides
7 because he didn't do an analysis of what was on the hard drive
8 to match it up to see if the --

9 THE COURT: Which slide are we talking about now?

10 MR. ZEBRAK: Well, I raised it in the context of
11 slide 44, Your Honor.

12 THE COURT: Yes, sir.

13 MR. ZEBRAK: But it's this issue where he didn't --
14 slide 44 depicts a CD called "Still Bill" by Bill Withers.

15 THE COURT: Yes, sir.

16 MR. ZEBRAK: And it has a hash beneath it, and it's a
17 hash concerning what Cox --

18 THE COURT: Two sets of numbers, and I don't know
19 what either of them are.

20 MR. ZEBRAK: Well, yes, sir. So it's one --

21 THE COURT: Is it hash values?

22 MR. ZEBRAK: It's one long set of numbers. And on
23 this slide, it has it for the proposition that within "Still
24 Bill," you don't know if it's Tammy Wynette or "Still Bill" or
25 something else.

1 And this isn't an example he picked out of the air.
2 They picked it because they want to relate it to testimony
3 earlier in the case.

4 THE COURT: That's perfectly appropriate, right?

5 MR. ZEBRAK: Well, I mean --

6 THE COURT: Why wouldn't you try and relate it to
7 something that's happened in the course of the trial, if you
8 can?

9 MR. ZEBRAK: Well, Your Honor, he conducted no
10 analysis of this. And this implies that -- or it states that
11 he does, and -- but let me explain further, sir.

12 THE COURT: You're -- if you're just rehashing what
13 we just talked about an hour ago, cross-examine him and narrow
14 the confines of what he testifies about.

15 MR. ZEBRAK: Well, yes, sir, and I'm happy to do
16 that. May I explain one final piece to it, which I didn't
17 realize earlier, because it was -- until I saw the registration
18 when he handed me the binder during the testimony.

19 Earlier in the slides, they show a track, which is
20 the track at issue in this case, "Lean On Me," and they show it
21 next to the album, which they have throughout here. Right.
22 The hash is not that, yet they have the "Lean On Me" next to
23 the album, right and left, and they're trying to confuse the
24 jury to make it think like a work in suit is the example for
25 Tammy Wynette. It's incredibly deceptive. And it's exactly

2217

1 what counsel said he wasn't going to use the slide for.

2 THE COURT: All right. Your exception is noted.

3 Ready for the jury?

4 MR. BRODY: Yes, sir.

5 THE COURT: And let's get Mr. Feamster back.

6 NOTE: At this point the jury returns to the
7 courtroom; whereupon the case continues as follows:

8 JURY IN

9 THE COURT: All right. Please have a seat.

10 And please resume, Mr. Brody.

11 BY MR. BRODY: (Continuing)

12 Q. Dr. Feamster, before we broke I think I asked you a
13 question along the lines of whether you had prepared a slide to
14 illustrate the ways in which there can be ambiguities in what
15 you find when you search one of these peer-to-peer networks for
16 a song.

17 Do you recall that generally?

18 A. I remember that question, yeah.

19 Q. Have you prepared such a slide?

20 A. I have, yes.

21 Q. We have -- oh, I've got the clicker.

22 What's the first -- so if you were searching on
23 something called "Still Bill," what's the first thing you might
24 find?

25 A. "Still Bill," okay. So you might find, for example, a

2218

1 copy of the album called "Still Bill." So it might be the
2 actual thing that you are looking for.

3 Q. What else might you find?

4 A. You might find a copy of a track on that album, okay?

5 Q. Okay.

6 A. So not the whole album. Right. It might be the original
7 version of that song. Right. So it might be that work. It
8 could be something else entirely.

9 This is why we do the digital fingerprinting for
10 verification. Could be any of the number of things that
11 we've -- that I've shown here.

12 Q. Okay. What's another example that you might find?

13 A. Another example might be, and I'm sure we're all familiar
14 with this general concept, that two different pieces of work
15 might have the same album name. So you might be searching for
16 Bill Withers' album "Still Bill," and you might get some other
17 album with the same name.

18 Q. I guess I should have asked you to talk about the search
19 "Lean On Me."

20 A. Okay.

21 Q. That probably would be more fitting for this slide.

22 A. Okay.

23 Q. So is that still going to produce this range of
24 possibilities that you've been describing?

25 A. Correct.

2219

1 Q. Okay. What's another possibility?

2 A. Maybe someone's made a home video. It might just be --
3 you know, not the Bill Withers album entirely. So if, you
4 know, I make a home video, it's called "Lean On Me."

5 It could also be some home video that has "Lean On
6 Me," the song in the background, for example.

7 Q. How about another one?

8 A. Something that occurs, and I think we heard about in some
9 of the other testimony, is that sometimes files can be
10 completely mislabeled.

11 Q. Okay. What's another possibility?

12 A. This relates to what we talked about earlier where,
13 essentially, I might say that I have something, in all or in
14 parts, and not -- and have something completely different.

15 Q. This is the problem with the dishonest peer who's
16 misrepresenting what it possesses?

17 A. The dishonest peer that we talked about earlier and that
18 we also heard about in the Harbor Labs report that I relied on.

19 Q. And I don't want you to give me a number for this, but do
20 you have a qualitative sense about how likely it is that you're
21 actually going to encounter one of these dishonest peers?

22 A. Oh, it's quite likely.

23 Q. Okay. What about -- what's your last one here?

24 A. File could be corrupted. We talked about that when we
25 talked about the context of corruption of a piece of a file,

2220

1 the same thing could happen. Obviously, if you've got a piece
2 of a file that's corrupted, you put that together, it's -- the
3 file is going to be corrupted. So --

4 Q. Okay. So now if what you were looking for was the "Lean
5 On Me" track in the "Still Bill" album, which of these would --
6 have you got a slide that indicates which of these would be the
7 wrong file?

8 A. Sure, sure. Yeah, if you could just advance, we'll see
9 that.

10 Right. So none of these things in red would be what
11 we were looking for originally.

12 Q. Okay. And we talked about this piece-checking process?

13 A. That's right.

14 Q. Does that help with this problem of ambiguity, of
15 unclarity as to what's being returned?

16 A. It's essential.

17 MR. ZEBRAK: Objection, Your Honor, leading.

18 THE COURT: Yeah. All right. He has answered.

19 Let's not lead, please.

20 BY MR. BRODY: (Continuing)

21 Q. Is there another way to -- is there -- what is the
22 helper -- the hash checking that we just looked at?

23 A. Right. So the hash checking is going to -- is going to
24 mainly defend or check against some of these things that we're
25 looking at on the right side of the slide.

2221

1 So, for example, if the file is corrupted, the hash
2 check would pick up on -- pick right up on that.

3 If the file has been lied about -- so, for example,
4 remember what I talked about earlier where I said, okay, the
5 torrent file has hashes for each of the pieces, right, so if a
6 piece of the file has been corrupted, that hash check is going
7 to fail.

8 If the peer is lying about a piece, right, says, hey,
9 I got a piece of "Lean On Me," and it's actually not, then the
10 check is going to pick up on that lying.

11 Now, some of these others that we've shown here,
12 it -- that particular piece check isn't necessarily going to
13 pick up on those. But there are other ways to do that.

14 Q. The jury has heard about a technique called digital
15 fingerprinting, which is done by a company called Audible
16 Magic. Have you prepared a slide that illustrates that
17 concept?

18 A. Yes. We should talk about that.

19 Q. What does this slide show?

20 A. Right. So on that previous side, we talked about a whole
21 bunch of things that could possibly go wrong when searching for
22 "Lean On Me." Some of the other things on the slide were,
23 okay, I download something, I don't know what it is. Is it
24 erroneously named? Is it I downloaded a different copy of the
25 song? Is it a cover? Is it, you know, music in the back of an

2222

1 advertisement? Is it a live recording of the same thing?

2 I actually want to know what it is. Okay. So the
3 process of digital fingerprinting, in this case Audible Magic
4 is an example of that, would say, okay, I've downloaded
5 something, basically a collection of bits, now let's -- it's
6 essentially a slight simplification, but let's listen to it,
7 let's see what it sounds. Okay.

8 And then I'm going to compare that sound to what the
9 original work sounds like. Are those basically the same? If
10 yes, then we got a match.

11 Q. Okay.

12 A. If not, then no match.

13 Q. And is that what this slide illustrates?

14 A. Yes. So basically, you know, here's what the slide shows.
15 So on the bottom half, we basically have -- this is sort of a
16 nice graphic showing the -- you know, what an audio wave form
17 would look like. And what that's meant to represent is
18 essentially what would be stored in the Audible Magic database
19 in some form. Not exactly this. This is for the sake of
20 illustration. But Audible Magic basically knows what Bill
21 Withers' "Lean On Me" song sounds like. Okay.

22 Now, in the top half of the slide, if someone has
23 just downloaded something from BitTorrent, okay, is it Bill
24 Withers' "Lean On Me"? I don't know, let's check. Let's
25 listen to it. Or let's basically turn that bag of bits into an

2223

1 audio representation and see if it's actually "Lean On Me."

2 And to do that, basically you're comparing -- you're
3 trying to play back what you just downloaded from BitTorrent,
4 turn it into some audio, and then compare it against what
5 Audible Magic says is, ah, this is "Lean On Me."

6 Q. Okay. And does that process help with eliminating these
7 ambiguities?

8 A. In many cases, yes, it can do so.

9 Q. Let's talk about -- you said that -- so we've talked about
10 peer-to-peer networking. You said that you were going to talk
11 about how the MarkMonitor system was capable of operating and
12 how it operated for CAS.

13 Were there any particular documents that you found
14 helpful on that subject?

15 A. We're looking at three of those right here. I can
16 describe them to you.

17 Q. Tell us what they describe, please.

18 A. So the one on the left is MarkMonitor's description of
19 the -- of its system as it operated.

20 Q. And what exhibit is that, please?

21 A. That is DX 19 as I see it.

22 Q. Okay.

23 A. The second, I'm sure fresh in our minds, is the Harbor
24 Labs audit of the MarkMonitor antipiracy system. That's
25 Exhibit DX 89.

1 And then over on the right side, we have DX 130,
2 which is a similar audit that was performed by Stroz Friedberg.

3 Q. Okay. And you heard the testimony from Mr. Bahun about
4 MarkMonitor's system, right?

5 A. Yes, I did.

6 Q. And you heard the testimony just now from Mr. Monson about
7 the Harbor Labs report?

8 A. Yes, I did.

9 Q. And the jury will hear from Mr. Rubin of Stroz Friedberg,
10 but you've read his deposition and read the report, right?

11 A. Yes.

12 Q. Okay. Did you prepare a slide that summarizes the key
13 steps of the process that was implemented for the Copyright
14 Alert System?

15 A. Yes, I did.

16 Q. What does this slide show?

17 A. Okay. So we've heard about this in some previous
18 testimony, but I'll relate it and explain it as I understand
19 it.

20 Okay. So there are four steps in this process.
21 We're going to go through each one of them in more detail.

22 Okay. But the first -- step one is locating and downloading
23 a potentially infringing file on the peer-to-peer network. So
24 in that step, it's basically going to do the full download.

25 Okay. Step two, right, what we just talked about,

2225

1 right. So after the download, you've got to figure out, what
2 the heck did you just download. Okay. So step two is perform
3 that digital fingerprinting process that we just described to
4 say, is that a work -- is that an infringing work.

5 Okay. Step three, right. We talked about two
6 aspects that -- you know, two things we're trying to discover.
7 One is, what is this thing? And the other is, what are the
8 peers actually doing. Right.

9 So essentially in parallel to step two is an
10 investigation of peers on the peer-to-peer network. So
11 MarkMonitor has a piece of software that basically acts as an
12 agent going out on to the BitTorrent or peer-to-peer network, I
13 should say, to try to determine whether or not a peer is
14 sharing a file in all or in parts.

15 And then finally, if through steps two and step three
16 the MarkMonitor software determines that there is an IP address
17 on the Internet -- I didn't say what an IP address was, but
18 basically a machine on the Internet that's identified by an
19 interpret address. Right. Says, okay, I found a peer located
20 at that place on the Internet that appears to be sharing a
21 piece of this infringing work, now I'm basically going to send
22 a notice to the corresponding ISP.

23 And that's something that you can do because you can
24 map the IP address to the corresponding ISP.

25 Q. Okay. And have you prepared some slides that illustrate

2226

1 each of these steps?

2 A. Yeah, let's talk about each of them in more detail.

3 Q. Okay. Let's talk about step one. So what does this slide
4 show about how step one is performed?

5 A. Right. So in this case, you know, we've already talked
6 about how a search on a peer-to-peer network would work. And
7 this step operates in substantially the same way as what we
8 described.

9 So MarkMonitor has a piece of software, an agent,
10 that basically goes out on a peer-to-peer network and attempts
11 to download a complete copy of that file.

12 Q. And then what happens?

13 A. Just as we described before, if all goes well, the agent
14 obtains a complete copy of that file.

15 Q. Okay.

16 A. That's step one.

17 Q. What's -- what does your slide show about step two?

18 A. Right. So this is, this is sort of what I was just saying
19 before, is that, okay, the file has been downloaded and
20 assembled. I don't know what it is. So let's now ask Audible
21 Magic, what is this? Is this something that is recognized in
22 this database as an infringing work?

23 Q. Okay.

24 A. Okay.

25 Q. And then what does this slide illustrate about that step?

1 A. Okay. So basically this is a simplification. I should
2 say, that there are a variety of ways that Audible Magic does
3 digital fingerprinting that we're not going to get into. But
4 essentially what this is showing is on the top half, this is
5 the downloaded file, right, we take that bag of bits and
6 convert it into some signal, wave form, audio essentially. I'm
7 simplifying, but that's essentially what's going on. It's
8 called a fingerprint.

9 And then that gets submitted to Audible Magic and
10 compared against what's on the bottom half of the screen,
11 that's called the reference file. If those match, all right,
12 or if Audible Magic has something in its database that matches
13 that, it's going to say, yep, there's a match, I got it, and
14 here's what it is.

15 Q. Before we get to the next slide, I want to look at some of
16 the documents you put up previously --

17 A. Okay.

18 Q. -- and the jury has heard about. So can we get
19 Defendant's Exhibit 89 in evidence, the Harbor Labs report.

20 And this is the report that Mr. Monson testified
21 about just earlier this afternoon, right?

22 A. That's right.

23 Q. Can we go to page 3 of the exhibit, please, 003.

24 Can you blow up the -- I'm sorry, 004. Can you blow
25 up the -- from the header design down to the paragraph beneath

1 the numbers. That's right.

2 So this is --

3 Your Honor, may I have leave to just kind of
4 encapsulate this to get to the passage that I want him to look
5 at? It will be leading in nature.

6 THE COURT: All right, go ahead. We'll see.

7 BY MR. BRODY: (Continuing)

8 Q. So the opening paragraph says that they believe that the
9 design meets the goal of precision. And they say it meets it
10 under certain assumptions stated below.

11 Can you highlight certain assumptions.

12 Okay. And then we're going to look at those
13 assumptions.

14 Now, can you read -- Dr. Feamster, can you read
15 number two?

16 A. Sure: The same torrent file, or a torrent file with a
17 matching info hash that was used to download the content for
18 the verification step is also used for downloading a complete
19 piece from a file sharer for the evidence generation step.

20 Q. What does that mean?

21 A. That basically means that the -- okay. So there is --
22 recall that there are two steps, right, that we talked about.
23 One is where the MarkMonitor agent downloads a complete copy of
24 the file, and then subsequently does a digital fingerprinting
25 match to say this is infringing. That is the verification

2229

1 step. Okay.

2 So there's the torrent file associated with that.

3 Okay.

4 Then there's another step, right, where we go out --
5 where the MarkMonitor agent goes on a peer-to-peer network and
6 tries to find other versions of that, other copies. There's a
7 torrent copy for that as well, supposed to be the same.

8 So that's -- that is basically what that's saying
9 right there.

10 And also, it does refer to downloading a complete
11 piece from the file sharer for the evidence generation step.
12 So it is also saying that during that evidence generation step,
13 the agent is -- is to download a complete piece from the file
14 sharer.

15 Q. Okay. And then can you -- can I direct your attention to
16 the last paragraph here. Can you -- it's been blown-up. Can
17 you read that passage, please.

18 A. Under these conditions, the hash of the piece the agent
19 downloads is verified against the expected hash of that piece
20 from the torrent file. Any mismatch is rejected.

21 Should I keep reading?

22 Q. That's fine.

23 A. Okay.

24 Q. And how does that relate to the hash checking that you've
25 been describing as part of the BitTorrent process?

2230

1 A. That is the same check that a BitTorrent client would do
2 when downloading a piece of a file that it's trying to get.
3 There's an expected hash of the piece in the torrent file. And
4 there's a hash that the agent is supposed to compute from the
5 downloaded piece. Those have to match. That's exactly what a
6 BitTorrent client does.

7 Q. And this is what MarkMonitor was doing in the CAS system;
8 is that right?

9 A. That's my understanding from the description in this
10 document.

11 Q. Could we go to page 009 of the document, please. The
12 second paragraph from the bottom, can you blow that up, please.

13 Can you read that first sentence.

14 A. Sure: Another example is testing the conjunction of
15 requirements for generating an infringement notice.

16 Q. And the second sentence?

17 A. Okay: For example, MarkMonitor requires that at least one
18 full BitTorrent piece be downloaded. This is essential for
19 accuracy.

20 Q. Do you have an understanding why that -- first of all, is
21 this the same step we were just describing, discussing?

22 A. Yes, downloading a piece. Yes, that's -- that's a
23 prerequisite to checking, checking the hash. So, yes.

24 Q. Okay. And why is that essential for accuracy?

25 A. Well, we already talked about that actually. There are --

2231

1 there are many reasons that a client could download a piece of
2 something from a peer and that piece has nothing to do with the
3 actual file its seeking. So we talked about lying peers. We
4 talked about file corruption. We talked about a number of
5 other scenarios that could happen there.

6 Q. Okay. Can we go a little further up on the page, it's the
7 third paragraph: For example. There we go.

8 Can you read -- can you read the first two sentences
9 of that paragraph?

10 A. For example, every element of the design examined in this
11 report must be tested. There must be unit tests validating the
12 correctness of the SHA-1 check on the downloaded pieces.

13 Q. And what is a SHA-1 check on the downloaded pieces?

14 A. That's the hash that we've been talking about.

15 Q. Okay. And why would Harbor Labs -- why would it be
16 mandatory to make tests to validate the correctness of that
17 check?

18 MR. ZEBRAK: Objection, Your Honor.

19 A. Well, that's essential because --

20 THE COURT: I'm sorry.

21 MR. ZEBRAK: It's leading and no foundation.

22 THE COURT: All right. It's leading. Rephrase your
23 question.

24 BY MR. BRODY: (Continuing)

25 Q. Do you have an understanding of why Harbor Labs said that

1 that must be tested?

2 A. I do.

3 MR. ZEBRAK: Objection, Your Honor, no foundation.

4 He didn't include this in his report.

5 THE COURT: Overruled. Based on what you read in the
6 report? Go ahead.

7 THE WITNESS: Can you ask the question again, please.

8 I'm sorry.

9 BY MR. BRODY: (Continuing)

10 Q. I forgot the question. So do you have an understanding of
11 why Harbor Labs would have said that MarkMonitor must -- there
12 must be unit tests on the downloading of a SHA-1 hash check?

13 A. Yes, I do.

14 Q. What's your understanding?

15 A. The reason that Harbor Labs would say this, and I believe
16 it -- if I'm not mistaken, there's another part of the report
17 where they talk about ways that that piece that a client
18 downloads could go wrong, and they specifically talk about an
19 instance of dishonest peers.

20 Q. Why don't we go down to that then. Let's look at the
21 third paragraph from the bottom. It begins: For example.

22 Can you read that?

23 A. There it is, yep: For example, when new agents are
24 released, they should, at the very least, be tested against a
25 dishonest BitTorrent client that uploads incorrect pieces. The

2233

1 MarkMonitor design should catch these faulty pieces during the
2 check of the SHA-1 hash. An end-to-end test where this
3 behavior is verified is essential.

4 Q. And why would it be important to test the agents against
5 dishonest BitTorrent clients in uploads of incorrect pieces?

6 A. Without performing that hash check, the agent has
7 absolutely no idea of what it just downloaded from a peer. It
8 could be absolutely anything.

9 Q. Okay. Now, I think another one of the documents you put
10 up that helped you understand this -- the CAS system, was
11 Defendant's Exhibit 17.

12 Can we get that document up, please.

13 Was there anything in this document that helped you
14 understand what MarkMonitor was doing with respect to this hash
15 checking --

16 A. Yes, this was, this was useful.

17 Q. Can we go to page 20 of the exhibit.

18 A. Yep.

19 Q. Can you blow up the screen shot in the middle of that
20 page?

21 Does this show anything about whether MarkMonitor was
22 actually performing the download and SHA-1 hash check from a
23 peer in the CAS implementation of its system?

24 A. Yes, it does.

25 Q. How does it show that?

2234

1 A. This is one of the files in the so-called evidence package
2 that the MarkMonitor software assembles when investigating a
3 peer. And this is, this is the content info file within that
4 evidence package.

5 So I believe we heard about that in earlier
6 testimony. But in particular, the -- what we're interested
7 in -- and there's a number of interesting things here. But
8 what you asked about was, can we figure out what's going on
9 with download and hash-based verification. And there are two
10 lines in this file where you can see that that has been logged.

11 Q. Which are those?

12 A. There's one that says: Downloaded. Okay. And to the
13 right of that you can see a report or a log for this
14 investigation, how much of the agent -- sorry, how much of this
15 file the agent downloaded.

16 And there's a second line that says: Verified. And
17 that refers to how much of this file the agent performed that
18 hash-based verification on.

19 And we see both the number of bytes, kilobytes in
20 this case it's represented as, and the percentage of the file
21 for which it did that download and verification.

22 Q. Did you prepare a slide that illustrates how this step is
23 performed in the CAS, the Computer Alert System implementation
24 of MarkMonitor's system?

25 A. Yes.

2235

1 Q. We've got to go back. I think I may have advanced this
2 slide. Okay.

3 Is this the slide?

4 A. That's right.

5 Q. What does this show?

6 A. Okay. So at this point, I forget the MarkMonitor
7 terminology for this part of the software, but basically the --
8 this is the agent that basically joins the peer-to-peer network
9 and attempts to find other peers in that peer-to-peer network
10 around the Internet that may be sharing all or part of that
11 file in question. Okay.

12 Q. And what's the next -- what happens next?

13 A. Yeah.

14 Q. Should we get a response, I do, then what happens?

15 A. Right. I should mention also, the way that it does that
16 is, you know, exactly the same way that a BitTorrent client
17 would go hunting for that.

18 Q. Okay.

19 A. And now what we're looking at, I think to remind folks, is
20 what was -- you know, what the system was capable of, and my
21 understanding of what it did in the CAS. As described in the
22 report we just looked at, the agent would download and verify a
23 piece of that file that it was searching for in the
24 peer-to-peer network.

25 Q. And how does this compare to what a typical peer would do

2236

1 in a BitTorrent network?

2 A. That particular step is identical. Now, it's only
3 downloading one piece. Right. So a real BitTorrent client,
4 obviously probably interested in the whole file. But the step
5 of downloading a piece and verifying would be exactly as a
6 BitTorrent client would do it.

7 Q. And did you prepare a slide about the fourth step in this
8 process?

9 A. I did, yes.

10 Q. What happens in the fourth step?

11 A. Okay. So at this point -- and there's an important --
12 sort of deduction to this "if." Right. If an infringing file
13 is found, right, at a CAS participating ISP, there's a notice
14 sent. Okay. So there's a bunch of things that sort of -- you
15 know, we break that done. And one is, of course, the IP
16 address. We've got to figure out if that IP address is in fact
17 a CAS -- a participating CAS ISP subscriber.

18 The other is, have we found an infringing file? And
19 there's a process by which steps 2 and 3 are joined to
20 determine that, ah, that piece that I just found not only is a
21 piece of the file that was advertised in the torrent, it's a
22 real piece, the verification checked, but also it's a piece of
23 an actual work.

24 So putting steps 2 and 3 together allows the software
25 to make that inference and generate the -- you know, decide

1 that it's time to generate a notice.

2 Q. By the way, were you able to examine the software that
3 implemented that step?

4 A. No. That step I never saw. I can only deduce what must
5 have happened. I was able to see the source code for steps
6 three and step four. I was able to identify those parts of the
7 software.

8 And it was really puzzling actually, because the two
9 databases that were used in these two steps appeared to be
10 completely different. Okay.

11 Now, I also was not provided with the schemas for
12 these databases --

13 MR. ZEBRAK: Objection, Your Honor.

14 THE COURT: Sustained. Sustained.

15 THE WITNESS: Okay. Sorry. I'm sorry, academics
16 like to ramble. I apologize.

17 MR. ZEBRAK: I move to strike.

18 THE COURT: Ask another question.

19 MR. BRODY: Yes, sir.

20 BY MR. BRODY: (Continuing)

21 Q. What happens in this step?

22 A. Can you clarify which step you're talking about?

23 Q. Step four.

24 A. I -- oh, I think I described that in maybe too much
25 detail. But to abbreviate that, if the software is able -- or

1 if the -- I should say if the process is able to make that
2 deduction, there is a separate piece of software that generates
3 the notice and sends it to the ISP.

4 Q. Okay. Did you prepare some slides that contrast the
5 implementation of MarkMonitor's system for CAS, for the
6 Copyright Alert System, with the implementation for Cox?

7 A. Sorry. Can you repeat that question?

8 Q. Sure. Did you prepare some slides that show how this
9 was -- this process was implemented for Cox?

10 A. Yes, I did.

11 Q. Okay.

12 A. Yes.

13 Q. How did the first two steps of the Cox system compare to
14 the CAS system?

15 A. Those were substantially the same.

16 Q. Okay. In the third step, what happened? How did that
17 differ?

18 A. This was a hugely significant difference. The software,
19 in this case, did not download any content from the subscriber
20 and --

21 Q. And what are you trying to indicate by that little box
22 with the question mark on it?

23 A. Right. So recall that there were two things we looked at
24 in that evidence file. Right. There was downloaded and
25 verified. Okay. So verification, as we talked about, is

2239

1 critical. Right. But if you don't download, you can't verify.
2 There's nothing to verify.

3 So the fact that the software failed to download
4 anything means that it can't verify anything. It actually has
5 no idea what the peer is actually -- what it actually has.

6 Q. Okay. Did you prepare a slide that summarized the
7 evidence you saw with respect to whether or not the Cox
8 implementation performed the download that the CAS
9 implementation utilized?

10 A. I did.

11 Q. Okay.

12 A. That was in the evidence packages that we've been talking
13 about.

14 Q. What does this slide show?

15 A. Right. So as part of -- as part of my analysis, I
16 reviewed the evidence packages that were prepared by
17 MarkMonitor and given to me, totaling more than 175,000
18 evidence packages. So we looked at an example of one of those
19 earlier.

20 And then, basically, I looked at a number of things
21 in those evidence packages, including the content info file
22 that we just looked at in all of them. There's an indication
23 there of what was downloaded and what was verified.

24 Okay. So that -- those files indicated that for all
25 but 143 of them, MarkMonitor software, in this case, did not

2240

1 perform a download. So, essentially, almost no downloads were
2 performed as a -- as part of producing this evidence.

3 Q. Did you also examine the software to confirm your analysis
4 of the evidence packages?

5 A. I sure did. I'd be happy to talk about that.

6 Q. Did your review of the software -- was it consistent with
7 what you saw in the evidence packages?

8 A. That's an interesting question. So the software, of
9 course -- there's software and then how it's configured.

10 Right. Okay. So I saw some interesting things in the
11 software. Okay.

12 Among them were some variables, including variables
13 that would basically control whether or not the software would
14 perform a download. And if it performed the download, was
15 there a threshold of how much the -- you know, the software --
16 the agent was to download.

17 So in examining the source code, I couldn't tell
18 precisely how those variables were set, and no information was
19 provided to me regarding the configuration of the software.

20 MR. ZEBRAK: Objection, Your Honor. May we have a
21 sidebar on this?

22 THE COURT: Approach the bench.

23 NOTE: A sidebar discussion is had between the Court
24 and counsel out of the hearing of the jury as follows:

25 AT SIDEBAR

1 THE COURT: Okay.

2 MR. ZEBRAK: Your Honor, and I suspect this will be
3 an issue with these other experts as well, they want to have
4 their experts bring in non-raised discovery disputes and
5 essentially claim that they were unable to do their review.

6 And Your Honor already told counsel not to bring in
7 discovery disputes. It's not even a discovery dispute. It's a
8 nonraised discovery dispute. And I suspect this is the first
9 of several. He has already done this now several times.

10 MR. BRODY: I'll move to strike the answer.

11 MR. ZEBRAK: Right.

12 MR. BRODY: I wasn't expecting that response. I just
13 wanted him to say that he looked at the software, if it had the
14 capability of doing the downloads or not, and that the evidence
15 packages --

16 THE COURT: Did he -- did you get that software that
17 he looked at and --

18 MR. BRODY: Yeah, yeah, yeah. For this software, I
19 thought he actually had the software. He did not have the
20 portions that he referred to.

21 THE COURT: Right. Okay. All right. Let's strike
22 the last answer. And ask -- and we're not going to get into
23 this discovery disputes about what you got or what you didn't
24 get. We're going to live with what we got in the testimony
25 here.

1 MR. BRODY: Yes, sir.

2 THE COURT: All right. Thank you.

3 NOTE: The sidebar discussion is concluded; whereupon
4 the case continues before the jury as follows:

5 BEFORE THE JURY

6 MR. BRODY: Your Honor, I move to strike the last
7 response.

8 THE COURT: All right. That's granted.

9 BY MR. BRODY: (Continuing)

10 Q. Dr. Feamster, I just want to focus very narrowly on
11 whether your review of the software for the step three process
12 was consistent with what you saw in the evidence packages?

13 A. Yes, it was.

14 Q. And did you reach a conclusion about whether or not the
15 Cox implementation of MarkMonitor's system differed from the
16 CAS implementation with respect to step three?

17 A. My conclusion was that it was possible to configure the
18 software to behave in different ways with respect to
19 downloading, and that the configuration for Cox -- for the Cox
20 manner was different. It did not perform the downloads.

21 Q. Okay. Thank you very much.

22 Did you -- have you prepared a slide that summarizes
23 your view about the importance of downloading and verifying a
24 piece of the file from the peer computer, the subscriber's
25 computer?

2243

1 A. I have.

2 Q. What is your view on that subject?

3 A. My opinion is that downloading and verifying at least a
4 piece of the file is an essential piece of the BitTorrent
5 protocol. It's also an essential piece of MarkMonitor's
6 Copyright Alert System method for detecting infringement.

7 Q. And did you prepare a slide that illustrates why that's
8 the case?

9 A. Yes.

10 Q. What does the slide illustrate?

11 A. So we've talked about this in some detail earlier, so I'll
12 just recap a bit.

13 But just to restate what I had said before, there are
14 significant reasons to be concerned about whether a peer
15 actually has a copy of the file that it claims to have. There
16 are a number of reasons why it might not. File corruption is
17 one. Peers lying about pieces that they may or may not have is
18 another. And as I said before, is quite likely that that could
19 happen.

20 Q. How likely is the -- is the corruption issue -- how likely
21 is the corruption issue?

22 A. That is much less likely. Okay. I would say maybe --
23 this is, at most, 1 percent. It's probably even less than
24 that. There are mechanisms in place to correct for those types
25 of errors as well. So --

1 Q. So do you -- okay. Thank you. Which do you think is the
2 more important problem?

3 A. The lying peers aspect is far more likely, is far more
4 important. In this particular matter, it's more prevalent.
5 And there has been a lot of research on that.

6 Q. Okay. The -- did that -- this analysis --

7 THE COURT: I'm going to strike the -- his second
8 part of his answer about any --

9 MR. BRODY: About the research?

10 THE COURT: Yeah.

11 MR. BRODY: Yes, sir.

12 THE COURT: Listen to the question and answer the
13 question, please.

14 THE WITNESS: I'm sorry.

15 BY MR. BRODY: (Continuing)

16 Q. The -- did you prepare a slide that summarizes your --
17 well, I'm going to skip past this slide.

18 Did you prepare a slide -- just save a few minutes --
19 that summarizes your opinion about the reliability of the
20 MarkMonitor system as implemented for Cox?

21 A. Yes, I did.

22 Q. And is this the slide?

23 A. That's it.

24 Q. What is your conclusion?

25 A. If the MarkMonitor software did not perform a download, if

2245

1 it didn't download at least a piece of the file from that peer,
2 there is no basis for the software to conclude that that file
3 is what the peer says it is.

4 Q. Well, the jury heard some testimony about the ability to
5 use a SHA-1 hash to perform a verification. Have you prepared
6 a slide that addresses that issue?

7 A. Yeah, let's talk about that next.

8 Q. What does this slide show?

9 A. Okay. What I'm going to do is summarize a little bit
10 here. So -- and refer to some of my earlier testimony. Okay.

11 So, a SHA-1 hash -- you can think about a hash value
12 as basically just a compact representation, or basically a name
13 or a label for a bigger file. Okay. It's -- if those two
14 things correspond, the SHA-1 hash is based on a computation
15 of what's in the file.

16 But in the absence of that computation, a SHA-1 hash
17 is just a string of bits. And if I know what that value is,
18 right, if I'm interested in saying, I've got Bill Withers, "Lean
19 on Me," and I know the corresponding hash for that, then I
20 could just say, I've got Bill Withers, "Lean on Me," here's the
21 SHA-1 hash, and it's up to you to check it. Okay.

22 You could perform that computation and say, ah, it
23 doesn't match, right, it's something else. But if you don't
24 perform that computation, it doesn't mean much.

25 Q. Okay. And did MarkMonitor perform that computation for

1 Cox?

2 A. Not for Cox.

3 Q. Let's talk about step four.

4 A. Can I clarify my -- no, please go ahead, I'm sorry.

5 Q. Trust me, you'll get plenty of questions related to
6 verification.

7 A. Thank you.

8 Q. So let's talk about step four. What -- what happens in
9 step four of the Cox -- or really either of the systems?

10 A. Right. So we talked about this already, so I'll just
11 briefly recap. Right.

12 So the process -- at some point the process is
13 reaching a conclusion that some machine on the Internet, some
14 peer has an infringing file in whole or in part, and that it's
15 sitting on an IP address that is part of the Cox network.

16 Okay.

17 If it reaches that conclusion, then the e-mail notice
18 is sent. And a notice is sent to the ISP, to Cox in this case.

19 Q. Okay. And have you prepared a slide illustrating how
20 that -- what happens in that process for a business subscriber
21 to Cox?

22 A. Sure, yeah. Let's talk about that.

23 Q. What does this slide show?

24 A. Okay. So on the Internet there is -- there are devices,
25 hosts, machines, homes, et cetera, connected to the network.

1 And in its simplest form, you know, any connected device has an
2 IP addresses and -- let me back up.

3 What -- the goal, right, is ultimately to match the
4 IP address to a subscriber, an individual, somebody who is
5 basically doing the infringement. However, there is technology
6 in the Internet, there's something called network address
7 translation, or NAT, right, that allows a single IP address to
8 basically, you know, act as the connection point for many, many
9 other individuals and devices.

10 So actually most home networks even operate like
11 this, but more importantly, you know, a business might be
12 behind a NAT.

13 Q. Okay. And when a notice is directed to an IP address that
14 is a NAT, where does the notice go? What's illustrated on this
15 slide about where the NAT goes?

16 A. On this slide, what we're looking at here is basically a
17 school or some kind of organization, but the organization
18 basically is buying Internet service from Cox. That
19 organization may have many, you know, many connected end
20 points. And the notice is basically going to some, presumably
21 some e-mail address that's associated with that organization.

22 Q. And have you prepared a variation on this slide that
23 illustrates what information that notice gives you about the
24 individuals who are actually doing, supposedly doing the
25 infringing?

1 A. Sure.

2 Q. What does the notice show?

3 A. Right. So that, that individual IP address says nothing
4 about, you know, who behind that NAT actually is engaging in
5 that behavior.

6 Q. Okay. Have you prepared a slide that summarizes your
7 concerns about the way the MarkMonitor system was implemented
8 for Cox?

9 A. Yes.

10 Q. What does this slide show?

11 A. So to summarize, and to contrast with the -- with what
12 MarkMonitor did for CAS, the first two steps were substantially
13 the same. The problems come in the subsequent steps. And in
14 particular, the failure to verify that a Cox subscriber was
15 actually sharing a piece of an infringing work, in particular
16 the failure to download content, which is a prerequisite for
17 doing that verification, is a critical missing link in this
18 process.

19 Q. And finally, did you prepare a slide that states your
20 conclusion about the MarkMonitor system as implemented for Cox?

21 A. Yes, I did. Based on what I just summarized, it's my
22 opinion there's no reliable evidence that Cox subscribers were
23 sharing copies of the plaintiffs' works.

24 MR. BRODY: I tender the witness, Your Honor.

25 THE COURT: All right, thank you.

1 All right, cross-examination?

2 MR. ZEBRAK: Yes, Your Honor, thank you.

3 CROSS-EXAMINATION

4 BY MR. ZEBRAK:

5 Q. Good afternoon, Dr. Feamster.

6 A. Good to see you again.

7 Q. Likewise. Do you remember I took your deposition in this
8 matter, right?

9 A. I do.

10 Q. And do you recall you took an oath to tell the truth at
11 that deposition?

12 A. I do.

13 Q. And you're similarly under oath here today, right, sir?

14 A. Yes, I am.

15 Q. Sir, do you agree that there's a risk that if I walk
16 outside this courtroom today, I might get hit by lightening?

17 A. Absolutely.

18 Q. That's not very likely, is it?

19 A. Not likely.

20 Q. You talked a lot in your testimony about what could
21 happen, didn't you?

22 A. I sure did.

23 Q. But you didn't really talk much about probabilities, did
24 you?

25 A. No, I did not.

2250

1 Q. Okay. Well, I would like to start from there, and we'll
2 explore the difference.

3 A. Sure.

4 MR. BRODY: Your Honor, may I approach?

5 THE COURT: Yes, sir.

6 NOTE: A sidebar discussion is had between the Court
7 and counsel out of the hearing of the jury as follows:

8 AT SIDEBAR

9 MR. BRODY: So here's my concern. If he's going to
10 ask this witness, do you know what the probabilities are, he
11 knows what the probabilities are, and he's going to answer
12 those questions.

13 So if you want me to --

14 THE COURT: He already said highly likely about one.
15 I'm not sure what --

16 MR. BRODY: But there's, there's research out there
17 that gives numbers that quantifies this. He has looked at that
18 research.

19 I just -- if Mr. Zebrak asks that question, then he's
20 going to get a truthful answer. I just want to be clear about
21 that, unless you want me to tell the witness that he cannot
22 respond that way. In which case I have an objection.

23 THE COURT: Well, the way to avoid going outside of
24 his report in a deposition is to ask the question, is there
25 anything in your report or previous testimony that identified

1 any probability statistics. If you ask it that way, I think
2 he's got to answer it that way.

3 MR. BRODY: That's fair enough.

4 MR. ZEBRAK: Yes, Your Honor.

5 MR. BRODY: I just want to be clear if he's going to
6 ask the question, he's going to answer it.

7 THE COURT: Right. And I appreciate you coming
8 forward and asking -- how much do you have on
9 cross-examination?

10 MR. ZEBRAK: Oh, quite a bit, but I would like to do
11 a little bit right now before we break, if that's okay, Your
12 Honor.

13 THE COURT: Yeah, that's fine. This jury is going
14 home for the weekend, they're going to want to know what's
15 going on next week.

16 Do you have a prediction on how much time it will
17 take for you to put your case on?

18 MR. ELKIN: We'll be finished by Tuesday.

19 THE COURT: I'm sorry?

20 MR. ELKIN: We'll be finished by Tuesday.

21 THE COURT: Okay. And you've got -- end of the day,
22 middle day, or hard to --

23 MR. ELKIN: I don't know how much they're going to
24 do. I was thinking before we started with Feamster, I was
25 hoping to get it done by Tuesday morning, give them a chance

2252

1 for rebuttal. But I think it may drag on through Tuesday.

2 So I'm not confident, if they have a rebuttal case,
3 that we'll be done. But my goal was to be done by early to
4 mid-afternoon Tuesday. But Tuesday in any event.

5 THE COURT: Okay. Then I'll tell them we're hoping
6 to get to the case to them on Wednesday to begin their
7 deliberations. And I think that will be enough so we won't
8 have any problems. I think I mentioned Wednesday when we
9 started the jury selection.

10 All right, so let's tighten it up over the weekend,
11 you've got all that time to narrow and focus.

12 MR. ZEBRAK: I will.

13 THE COURT: All right, thank you all.

14 MR. ZEBRAK: We'll be ready to go. Thank you, Your
15 Honor.

16 NOTE: The sidebar discussion is concluded; whereupon
17 the case continues before the jury as follows:

18 BEFORE THE JURY

19 THE COURT: All right, please proceed.

20 MR. ZEBRAK: Thank you, Your Honor.

21 BY MR. ZEBRAK: (Continuing)

22 Q. And, Dr. Feamster, for today when I ask you a yes or no
23 question, I would appreciate you either answering yes or no.
24 Or if you can't do so, please tell me that and I'll try and ask
25 a different question.

1 A. I'll do my best.

2 Q. Okay. So right before counsel's objection or request for
3 a sidebar I had asked you about the difference between the
4 theoretical risk of something versus the likelihood it might
5 actually happen. Do you recall that?

6 A. I remember that.

7 Q. Okay. So in your 200 or so hours working on this case,
8 yes or no, sir, am I correct, you did not find a single
9 instance of an inaccurate MarkMonitor notice to Cox, correct?

10 A. No, I did not.

11 Q. Thank you. So, Dr. Feamster, after obtaining your
12 degrees, you've been a professor since then; is that correct?

13 A. That's correct.

14 Q. And am I correct that -- you said this is your first time
15 actually being admitted to testify in court as an expert,
16 right?

17 A. That's correct.

18 Q. And you, am I correct, sir, view the idea of being an
19 expert as a learning experience or a growth opportunity,
20 correct?

21 A. That's correct.

22 Q. You view it as a chance to look under the hood of a
23 working -- strike that.

24 You view your work as an expert as an opportunity to
25 get to look under the hood of a working system in the real

1 world; is that correct?

2 A. Absolutely.

3 Q. And during your direct testimony, Dr. Feamster, I believe
4 you said that you've been retained as a testifying expert for
5 Cox, correct?

6 A. That's right, yes.

7 Q. So I don't believe you mentioned your role as a consultant
8 capacity for Cox in this matter, did you?

9 A. I have also been retained in that capacity.

10 Q. Let's talk a little bit about that.

11 A. Sure.

12 Q. So in your role as a consultant to Cox -- or, actually
13 excuse me, was it Cox or Cox's counsel that retained you in
14 this matter?

15 A. I was retained by Cox's counsel.

16 Q. Okay. So in your role as a consultant, let's explore that
17 for moment.

18 A. Sure.

19 Q. Your role there is to assist Cox's counsel in preparing
20 its case, am I correct?

21 A. Yes.

22 Q. Help it with its litigation strategies and questioning of
23 witnesses, correct?

24 A. My role -- I am sorry, I can't answer that with a direct
25 yes or no.

2255

1 Q. Let me move on and I'll ask you a question you can answer.

2 A. Sure.

3 Q. You have helped counsel with their outlines for
4 depositions, right?

5 A. I have helped with parts of outlines, yes.

6 Q. Okay. And you've sat around a room with counsel talking
7 about trial strategy, right? It's a yes or no.

8 A. For my testimony, yes.

9 Q. Well, speaking of that, how long have you prepared for
10 your testimony today?

11 A. Depends on how you define "prepare." But let's call it --
12 I'm not sure I can answer that precisely because I don't know
13 quite what you mean by "prepare."

14 Q. Well, let's start with ballpark. How many days have you
15 spent meeting with counsel to prepare your testimony?

16 A. Two. I've been here since Tuesday, and I was here last
17 week as well for a bit.

18 Q. You've never worked in a professional capacity as an
19 expert, or otherwise, for any music industry company, have you?

20 A. No, I haven't.

21 Q. You've worked quite a bit for ISPs, correct?

22 A. I sure have.

23 Q. By the way, did you receive training on how to present to
24 a jury?

25 A. No, I did not.

1 Q. No? Did you receive a script for your testimony today?

2 A. No, I did not.

3 Q. Questions or answers?

4 MR. BRODY: Your Honor --

5 A. No, I did not.

6 MR. BRODY: Some of this is inappropriate.

7 THE COURT: Yeah, sustained. Let's move along.

8 MR. ZEBRAK: Okay.

9 BY MR. ZEBRAK: (Continuing)

10 Q. So you said that you have done quite a bit of work for
11 ISPs, but not any music industry company, correct?

12 A. That is correct.

13 Q. Done work for AT&T?

14 A. Not only for them, I also worked for them as a research
15 intern, yes.

16 Q. Okay. And am I correct, sir, you've also done work for
17 Comcast?

18 A. Yes, I have.

19 Q. Okay. And you've also done work for Charter, right?

20 A. Yes, I have.

21 Q. And in fact, you've served as an expert witness for
22 Charter, though you weren't admitted to testify in court in
23 that matter, correct?

24 A. That's right.

25 Q. Okay. Now, in that matter, do you recall what that matter

1 involved?

2 A. I sure do.

3 Q. Yeah. Charter was accused of misrepresenting to consumers
4 the speed it was selling its Internet service at, right?

5 A. That's correct.

6 Q. And you were serving as an expert on Charter's behalf,
7 correct?

8 MR. BRODY: Objection.

9 A. Yes, I was.

10 THE COURT: All right. Approach the bench.

11 NOTE: A sidebar discussion is had between the Court
12 and counsel out of the hearing of the jury as follows:

13 AT SIDEBAR

14 THE COURT: Where are you going here? We're not
15 going to explore whether, you know, some judge decided he
16 wasn't --

17 MR. ZEBRAK: No, sir.

18 THE COURT: All right. Where are you going?

19 MR. ZEBRAK: I just want to explore the nature of
20 what he did in that case, much along the lines that they've
21 done with our experts about their prior engagements. And it
22 won't be very long, just a few questions.

23 MR. BRODY: He thinks that Charter was a bad apple in
24 this case, and he wants the jury to think that Dr. Feamster was
25 complicit in that, and that's just inappropriate.

1 MR. ZEBRAK: They've -- Your Honor, they've squarely
2 tried to interject lots of issues and tried to taint record
3 companies. And I'm just asking about his prior engagement. I
4 don't think it's anything different than what they've done
5 throughout the case.

6 MR. BRODY: He's established that he worked for
7 Charter.

8 THE COURT: Yeah, your objection is sustained. Let's
9 move on.

10 MR. ZEBRAK: Okay. Thank you, Your Honor.

11 NOTE: The sidebar discussion is concluded; whereupon
12 the case continues before the jury as follows:

13 BEFORE THE JURY

14 THE COURT: All right. Please, go ahead.

15 MR. ZEBRAK: Thank you, Your Honor. Very well.

16 BY MR. ZEBRAK: (Continuing)

17 Q. Dr. Feamster, you're aware, are you not, that there are
18 four peer-to-peer protocols at issue in this case?

19 A. I am aware of that.

20 Q. BitTorrent is one?

21 A. Yes.

22 Q. Ares is another, the third is Gnutella, and the fourth is
23 eDonkey; am I correct?

24 A. Yes.

25 Q. And you feel you're qualified to testify with respect to

2259

1 each of those protocols?

2 A. I can't answer that as -- in terms of a yes or no
3 question.

4 Q. Well, you understand, sir, that notices to Cox involving
5 Cox's customers who are being reported for infringement,
6 reported them for infringement across those four networks,
7 right?

8 A. I understand that.

9 Q. And you're here today contending that there's -- you're
10 taking issue with the reliability of the infringement evidence,
11 correct?

12 A. Yes.

13 Q. So my question to you is very straightforward. Do you
14 feel that you are competent to testify about each of the four
15 protocols that are at issue in this case?

16 MR. BRODY: Objection.

17 A. I can't answer that question. It depends on what you ask
18 about those protocols.

19 Q. Do you know how those protocols, the other three relate to
20 BitTorrent?

21 A. I know how they work.

22 Q. Well, at the time of your analysis, sir, in this case, did
23 you have any understanding of whether Ares and Gnutella operate
24 in a substantially similar way as BitTorrent?

25 It's a yes or no question, sir.

2260

1 A. Can you clarify what time you're referring to? When I
2 performed my analysis?

3 Q. At the time you performed your analysis -- well, first of
4 all, you performed your analysis ahead of the deposition I took
5 of you in this matter, correct?

6 A. That is correct.

7 Q. Okay. And do you recall me asking you the same question
8 I'm asking you now at your deposition, about whether Ares and
9 Gnutella operate substantially the same way as BitTorrent?

10 A. I do remember that.

11 Q. And do you recall what you said?

12 A. If you could refresh my memory, that would help.

13 Q. Well, let's play it. It's page 178 and it -- well,
14 actually, you refused to answer my question at that time. Do
15 you recall that?

16 You said you hadn't done an analysis of those two
17 networks for purposes of your expert report; do you recall
18 that?

19 A. I do remember that -- I remember saying that I was asked
20 by counsel to focus on BitTorrent, which is what I did. And
21 so, when you asked me about Ares and Gnutella, I said I hadn't
22 studied those as carefully. Yes, I do remember that.

23 Q. Right. I think you said: I didn't review either of those
24 for -- in preparation for my report, and so I'm not going to
25 comment on that today.

1 Does that sound like something you said?

2 A. Absolutely.

3 Q. Okay. But you're here today contending that MarkMonitor
4 has no reliable evidence of infringement, correct?

5 A. That's what I said.

6 Q. And it's your view that they don't have any evidence of
7 infringement or just what you deem reliable, which one, sir?

8 A. I'm not sure I understand the distinction.

9 Q. Well, first of all, is your definition of "reliable" the
10 lightening that might strike me when I walk out of here today,
11 or is it something other than that? Let's start there.

12 A. Lightening striking has no bearing on reliability. Those
13 two concepts are not even relatable.

14 Q. For you, is reliability certainty? It's a yes or no
15 question, sir.

16 A. No, it is not.

17 Q. Well, let's explore a few other things.

18 So we've already established that at the time you did
19 your analysis, you hadn't reviewed how Ares and Gnutella
20 compared to BitTorrent, we've established that. Let's --
21 correct, sir?

22 A. Yeah, I agree.

23 Q. Okay. And I also asked you -- well, strike that.

24 At the time you did your analysis in this matter --

25 A. Yeah.

2262

1 Q. -- am I correct, you didn't know whether content files are
2 broken into pieces on the Gnutella protocol like they are on
3 the BitTorrent protocol, correct?

4 A. As I mentioned, I didn't review Gnutella in preparation
5 for my testimony that day.

6 Q. Right. So in preparation for your -- so for your analysis
7 in this case, in effect, you didn't review three of the four
8 protocols; is that fair to say? You didn't have an
9 understanding as to how those worked?

10 A. That is not correct. You asked me two different questions
11 there. So if you could split them up, that would be great.

12 Q. Sure. Well, at the time of your deposition, I asked you a
13 very basic question about whether on the Gnutella protocol
14 files are broken into pieces and then reassembled like on
15 BitTorrent.

16 Do you recall that?

17 A. I do vaguely remember that, yes. Yeah.

18 Q. Well, would you like me to read you your answer? You're
19 not disputing that you --

20 A. Oh, I definitely remember we had this discussion. And I
21 also remember telling you that in fact I had not refreshed my
22 memory on how those other three protocols worked. Yeah, I --

23 Q. Isn't that kind of just a very basic question about the
24 Gnutella protocol, sir, about whether files are distributed in
25 a unitary whole versus broken into pieces?

2263

1 A. Well, there are a lot of different peer-to-peer protocols.
2 These are just four. Okay. So there's actually many, many
3 peer-to-peer protocols. And the difference -- you know, every
4 one of these has differences.

5 And so, you know, it's -- I don't know, it's been
6 about, you know, several years since we -- you know, we've been
7 looking at these.

8 And so, of course, I would need to refresh my memory.
9 And if I hadn't been asked to do so, then I wasn't prepared to
10 comment at that point with certainty.

11 Q. Well, so did you only do what counsel asked you to do in
12 this matter? I mean, you said you weren't asked -- you weren't
13 asked to look at the other three protocols, right? It's a yes
14 or no question.

15 A. Yes, I was asked to focus on BitTorrent, yes.

16 Q. All right. But I mean, you take your expert work
17 seriously, right?

18 A. Absolutely.

19 Q. Right. You signed a report attesting to your opinion
20 about the infringement evidence in this case, didn't you?

21 A. Can you ask that again? I --

22 Q. You signed an expert report in this matter, right?

23 A. I sure did.

24 Q. And I took your deposition to ask you questions so I could
25 understand your opinions in this matter, right?

1 A. Yes.

2 Q. And -- well, first of all, your expert report in this
3 matter doesn't talk about lying bitfields, does it?

4 A. What the -- it does not mention those -- that phrase.

5 Q. Okay. Let me move on.

6 So you looked into BitTorrent, but not the other
7 three protocols, because counsel asked you to look into
8 BitTorrent; is that correct?

9 THE COURT: I think we've heard that enough times.
10 Let's move along.

11 MR. ZEBRAK: Thank you, Your Honor.

12 THE WITNESS: Actually, can I answer it?

13 THE COURT: No.

14 THE WITNESS: Okay.

15 BY MR. ZEBRAK: (Continuing)

16 Q. And am I also correct that at the time you did your
17 analysis in this case, you were unaware of whether files are
18 broken into pieces on the Ares protocol like on BitTorrent,
19 correct?

20 MR. BRODY: Your Honor, can we move ahead?

21 THE COURT: I'm sorry?

22 MR. BRODY: Objection, asked and answered.

23 THE COURT: All right. He's indicated he didn't look
24 at anything but BitTorrent. So let's not go through each one
25 when he's already testified.

1 MR. ZEBRAK: Sure. Yes, Your Honor.

2 THE COURT: Thank you.

3 BY MR. ZEBRAK: (Continuing)

4 Q. Dr. Feamster, on peer-to-peer networks, downloaders don't
5 pay for the music that they're downloading, right?

6 A. That's a complicated question. I think if you could be
7 more specific, I can --

8 Q. Sure. Let me ask the question a little more precisely.

9 When a peer downloads content from another peer on a
10 peer-to-peer network, they're not paying money to the peer that
11 distributed the file to them, correct?

12 A. That depends upon who is distributing the file and the
13 manner in which they're distributing the file. There are cases
14 when a peer does pay.

15 Q. Okay. Let's start with BitTorrent, sir. That's the one
16 peer-to-peer protocol you analyzed for your work in this case,
17 correct?

18 A. Yes.

19 Q. On the BitTorrent protocol, let's say a Cox subscriber has
20 a file and I want it.

21 A. Yes.

22 Q. Right. And I ask that Cox subscriber to distribute the
23 file to me. I'm not paying money to that Cox subscriber that
24 distributes it to me, am I?

25 A. If we're talking about one Cox subscriber to another,

1 generally, no. No money is changing hands there.

2 Q. Let's say I'm on Comcast and I ask a Cox subscriber for
3 the file -- peers are -- I'm not paying that Cox subscriber for
4 it, am I?

5 A. Generally speaking, no.

6 Q. Okay. Do you recall me asking you at your deposition
7 whether peers pay other peers for the files? And you said you
8 didn't know the answer to that, was that correct?

9 A. I don't recall. I'll take you at your word.

10 Actually, I can't imagine that I wouldn't know the
11 answer to that. So I -- I don't remember saying that. But it
12 might be the question was unclear.

13 Q. Page 92 of your deposition, line 11.

14 A. Okay.

15 Q. In your knowledge of peer-to-peer --

16 MR. BRODY: Hold on a second.

17 THE COURT: I'm sorry, we --

18 A. I need to find it. Thanks.

19 THE COURT: Yeah, let's give him an opportunity.

20 What page and what line, please.

21 MR. ZEBRAK: I thought I was just going to impeach
22 him with it, Your Honor.

23 THE COURT: He said he doesn't remember. So try and
24 refresh his recollection.

25 MR. ZEBRAK: That's fine. We can move on.

1 BY MR. ZEBRAK: (Continuing)

2 Q. Let's look at page 92, beginning on line 11.

3 A. Right. I see that.

4 Q. Does that refresh your recollection about the question I
5 asked and the answer you gave?

6 A. Yes. And the ambiguity in the question you asked and the
7 lack of the technical nature was exactly the same as the one
8 you just asked me.

9 Q. Well, let's -- let's move on.

10 So, Dr. Feamster, you're aware, sir, are you not,
11 that peer-to-peer systems are overwhelmingly used for copyright
12 infringement; is that correct?

13 A. I'm having a problem with the use of the word
14 "overwhelmingly." So I can't answer that question as you
15 framed it.

16 Q. Do you have an understanding about whether the high
17 majority of the use that occurs on peer-to-peer networks is for
18 purposes of copyright infringement?

19 A. Again, high majority I'm not sure. But, you know, I
20 don't -- I agree with you that copyright infringement takes
21 place on peer-to-peer networks, absolutely agree with you.

22 Q. So -- but you just don't have an understanding one way or
23 another about any percentage of how often it occurs; is that
24 correct?

25 A. As far as prevalence, that's actually quite difficult

1 to -- to put a precise number. And I would be happy to tell
2 you why it's tough to put a precise number on that if you want
3 more detail.

4 Q. You've never tried to calculate the degree to which
5 copyright infringement occurs on peer-to-peer networks,
6 correct? You yourself?

7 A. I have not done so. It's quite difficult to do so.

8 Q. When did you first become familiar with what a
9 peer-to-peer network is?

10 A. Actually, I was a grad student around the time that they
11 were being invented.

12 Q. Have you used one -- oh, I'm sorry. Were you finished?

13 A. I wanted to clarify because I think I know where you're
14 headed with this, and it sort of depends upon what you mean by
15 peer-to-peer network. But let me stick with my answer and then
16 we can -- we can expand on that.

17 Q. You've used Napster -- the Napster peer-to-peer network
18 for your personal use, correct?

19 A. I have used it.

20 Q. And you used it to get music, correct?

21 A. As I recall, yes.

22 Q. And you used it to get music without paying for it,
23 correct?

24 A. That is true.

25 Q. Could have gone into a Tower Records or some other record

1 store to get the music, but instead you went to a peer-to-peer
2 network to download it for free, correct?

3 A. Generally I went to Tower Records actually. But in this
4 particular case, I was kind of curious how Napster worked
5 because as a computer scientist, you know, everyone was talking
6 about it, and I wanted to see what this thing was all about.
7 So, yeah, I downloaded a file with Napster. That was 1999, I
8 think.

9 Q. So you did it for research purposes?

10 A. Not for research. I -- at that point I was an
11 undergraduate, but I was curious. So like any curious person,
12 I wanted to learn what the hype was all about, how this thing
13 worked.

14 Q. And how many times did you go to Napster to get music for
15 free rather than buying it in a store?

16 A. Once.

17 Q. You're sure, only once?

18 A. I remember the instance. I can even tell you where I was.
19 Couldn't give you the exact date. But, yeah, I do remember.

20 Q. And besides using peer-to-peer for your own personal use,
21 you've also done a little bit of research on peer-to-peer; is
22 that correct?

23 A. That's a very good characterization, yes.

24 Q. And that research you did was back in 2007, correct?

25 A. That sounds right.

1 Q. And could you tell the jury, please, the year that
2 BitTorrent was invented.

3 A. Oh, invented? It was probably around 2000, 2001,
4 somewhere in there.

5 Q. So about six years into BitTorrent's existence you did a
6 little bit of research on BitTorrent, right?

7 A. That's right.

8 Q. And do you have an understanding of when the infringement
9 notices from plaintiffs went to Cox in this case?

10 A. That was, if I remember correctly, the 2013 time frame,
11 somewhere in there.

12 Q. So about six or seven years past the instance in which you
13 did a little bit of research on peer-to-peer, right?

14 A. That's right.

15 Q. So basically BitTorrent doubled in age since the time you
16 did your research on BitTorrent, correct?

17 A. If we're talking about that particular paper that was
18 published in 2007, yeah, that's right, it occurred about right
19 in the middle of that time.

20 Q. And by the way, you say that paper. You've only punished
21 one paper focusing on file sharing, correct?

22 A. I would have to go back and look at my CV. I've got a
23 pretty long list of publications. And if you want to talk
24 about BitTorrent, then you're absolutely right.

25 If we're talking about content distribution, I got a

1 long list of publications that I can read off to you if you
2 want to go through my CV on content distribution.

3 Q. Well, I don't want to belabor the point by talking about
4 content distribution.

5 A. Okay.

6 Q. I'm interested in filing sharing. Do you understand, sir,
7 that this network is about file sharing -- this case is about
8 file sharing networks, right?

9 A. Content distribution is a way to share files.

10 Q. Okay. Well, let's -- could I have the binders, please?

11 THE COURT: How much more do you have, Mr. Zabek?

12 MR. ZEBRAK: Well, I won't finish today, but I could
13 go for another ten, 15 minutes if that's okay with Your Honor.

14 THE COURT: Is that good? Okay, let's go for another
15 ten or 15 minutes. Thank you.

16 MR. ZEBRAK: Just give me the hook when it's time.

17 THE COURT: All right.

18 MR. ZEBRAK: Thank you, Your Honor.

19 So here's one for the witness. Here's one for
20 counsel.

21 THE WITNESS: Thank you.

22 BY MR. ZEBRAK: (Continuing)

23 Q. Dr. Feamster, if you could please turn to tab 6, and let
24 me know when you're there.

25 A. Okay, I'm there.

1 Q. And do you recognize the document that's behind tab 6?

2 A. I do.

3 Q. And what is it?

4 A. This is a paper that I published. It's the paper that
5 you've been referring to, yes.

6 Q. So this is -- this is the paper on file sharing you wrote
7 in 2007, right?

8 A. This is the paper that specifically talks about issues in
9 BitTorrent where there might be a BitTorrent swarm where an
10 entire copy of the file does not exist in the swarm.

11 Q. Okay. And, Dr. Feamster, am I correct, this is the only
12 time in your professional career that you've done testing on
13 BitTorrent; is that correct?

14 A. I would have to check.

15 Q. Well, I'm not asking you to check. I'm asking you right
16 now, sir, whether this is the only instance in which you've
17 done any testing on BitTorrent?

18 A. I don't recall another instance.

19 Q. Now, you did this research and wrote this paper because
20 you saw a problem with respect to how BitTorrent was
21 functioning, correct?

22 A. That's right.

23 Q. Right. The idea is in your view BitTorrent was working
24 really well for popular content, but not so much for content
25 that might be a little less popular than maybe as many peers

1 didn't have; is that correct?

2 A. That's a generalization to say that it was working really
3 well, because there were other problems that I've talked about.
4 But there was a particular problem for which it -- which it
5 wasn't working well. And you've characterized that particular
6 problem well. The problem was with unpopular files, yes.

7 Q. So sometimes a peer in a swarm couldn't get everything
8 they wanted, and you were trying -- and you were doing some
9 research and writing on that issue, correct?

10 A. That is correct.

11 MR. ZEBRAK: Okay. Your Honor, I would like to move
12 this into evidence. It's DX 162.

13 THE COURT: Any objection?

14 MR. BRODY: No objection.

15 THE COURT: It's received.

16 MR. ZEBRAK: Mr. Duval, if you could publish that,
17 please.

18 BY MR. ZEBRAK: (Continuing)

19 Q. So -- and the problem you saw was that -- you were trying
20 to improve BitTorrent with this idea, right?

21 A. I was trying to solve a particular problem and --

22 Q. Right. Have BitTorrent work even better for those people
23 that wanted to locate and download content, right?

24 A. Yes.

25 Q. Right. Okay.

1 And if you could, please, pull up right under
2 Introduction, that first paragraph.

3 And, Dr. Feamster, if you could look at that first
4 paragraph. Would you -- so here it says in the second -- or in
5 the first sentence: Estimates place its contribution to all
6 Internet traffic at 35 percent.

7 Could you explain to the jury what that means.

8 A. Right. So at the time that this was written, that was
9 2007, as you pointed out, what that basically refers to is
10 that -- there's a lot of traffic going across the Internet, Web
11 traffic, e-mail, these days a lot of video streaming.

12 And at the time this was written, BitTorrent traffic
13 was 35 percent of all traffic on the Internet by some estimates
14 by reference 1. And there we're doing a percentage by volume.
15 Right. So if we're counting bytes flying across the Internet,
16 it's 35 percent.

17 Q. And a little bit further in that paragraph you say:
18 BitTorrent works well for popular content.

19 Do you see that, sir?

20 A. I see that.

21 Q. And by popular content, are you referring to popular music
22 and movies and the things that people are interested in
23 downloading from BitTorrent?

24 A. Not necessarily.

25 Q. What were you referring to when you saw popular content?

1 A. Content is a general term. We heard in the last
2 testimony, for example, that BitTorrent could be used to
3 distribute a variety of files. Some of those include, for
4 example, ISOs for Linux, which turns out to be really popular,
5 popular thing that people want. We just heard about that.

6 Q. Right. And regardless of the exact percentage at which
7 peer-to-peer activity is infringing, you've already agreed that
8 a very significant portion of it involves infringement, yes or
9 no, sir?

10 MR. BRODY: Object to the question.

11 A. You keep putting adjectives in front --

12 THE COURT: Stop --

13 A. -- of that make it really tough for me to give you a yes
14 or no answer.

15 THE COURT: Stop. Hold on.

16 THE WITNESS: Oh, I'm sorry.

17 THE COURT: There's an objection.

18 THE WITNESS: Yes.

19 THE COURT: So when you hear an objection, hold.

20 THE WITNESS: I'm sorry.

21 THE COURT: You misstated his prior testimony. So
22 it's -- objection sustained.

23 MR. ZEBRAK: Well, let me move on.

24 BY MR. ZEBRAK: (Continuing)

25 Q. Dr. Feamster, what do you think is more popular on

1 BitTorrent, a Lady Gaga song or some Linux software?

2 A. I'm personally more interested in Linux software.

3 Q. And your idea here was, you came up with a concept to
4 solve this problem where some people who wanted to download
5 something couldn't find it, right? That's what we're talking
6 about in this article?

7 A. What we're talking about is a particular problem
8 where what -- that happens in BitTorrent where a particular
9 peer has a complete portion of the file, and then it's got the
10 entire portion of the file and it has no incentive to basically
11 share that with other people once it has the complete file.

12 And so, it leaves the network.

13 Q. Right. And you --

14 A. Right. That's the problem we're talking about.

15 Q. I apologize. I thought you had finished.

16 A. I'm sorry.

17 Q. Excuse me. And you went about proposing how to solve this
18 problem by coming up with a concept to pay peers to actually
19 store content so that it could be available kind of across
20 swarms; is that correct?

21 A. That's right.

22 Q. Right. And money that they could cash in and put in their
23 pocket for storing content, right?

24 A. I don't know if we talked about currency. Actually, this
25 was -- I believe it could be currency. But actually the

1 concept here is a generic form of credits.

2 Q. And you wanted a very strong degree of secrecy and
3 anonymity to what those peers were doing, right?

4 A. It's been awhile since I've read this article, but if you
5 want to point me to something, I can comment on it.

6 Q. All right. Why don't you look on page 5, you --
7 specifically section 4.4 on the left side.

8 A. Yes, I see that.

9 Q. Does that refresh your recollection about what you were
10 proposing here?

11 A. If I can read it, that would be great.

12 I see that.

13 Q. And you were proposing that the peers have what you call
14 plausible deniability, am I correct, sir?

15 If you could highlight that.

16 A. I don't see that -- oh, I see that, yes.

17 Q. Do you understand what the term "plausible deniability"
18 means within the context of what you're proposing here?

19 A. Absolutely.

20 Q. And that -- the idea is you didn't want peers to be able
21 to indicate where they got the content from, right? To know
22 that information, am I correct?

23 A. I believe, if I'm remembering correctly, that the
24 deniability relates to -- we don't want the peer to know
25 exactly what it's storing if it's coming from some -- if it's

1 doing this on behalf of the swarm.

2 Q. So, Dr. Feamster, if this was lawful activity, is there
3 any reason why a peer would need plausible deniability to know
4 what they're hosting and where it came from?

5 A. Oh, yeah, absolutely.

6 Q. It's not because if it turned out to be infringing
7 content, you didn't want that peer to be in a position to know
8 where it came from, was it?

9 A. Absolutely not. This is all about privacy. And as we
10 know, that's very important.

11 Q. Privacy? What about where content came from that your
12 hosting implicates a privacy right?

13 A. What this is -- what this is about is essentially what you
14 have is a shared storage mechanism. Okay. And this shared
15 storage mechanism, the peers and the swarm are basically
16 cooperating to make sure that even if somebody leaves the
17 swarm, that that swarm still contains a complete copy of that
18 file. Okay.

19 So do I need to know where that original piece came
20 from? If my goal is just to preserve a copy of the file in the
21 swarm, there's no reason for anyone who's contributing in that
22 fashion to have that information.

23 And this is something that typically systems
24 engineers care a lot about, is preserving the privacy of the
25 users who are participating in a system.

1 Q. And it wasn't just where the files came from, you didn't
2 even want these peers that paid for this activity to even know
3 what they were hosting, right?

4 A. In the case of maintaining these particular pieces, no.

5 Q. And BitTorrent has -- you have an understanding of how
6 BitTorrent exists in the time period in which the notices went
7 to Cox; am I correct?

8 A. I believe so, yeah.

9 Q. And in -- at the state in time in which BitTorrent
10 existed, records aren't kept of what one peer distributes to
11 another peer, are they?

12 A. I can't answer that question in a yes or no.

13 Q. Am I correct?

14 A. You phrased it as a passive voice, so I didn't know who's
15 keeping the records.

16 Q. Well --

17 A. Yeah.

18 Q. Dr. Feamster, am I correct that there's no place to go to
19 get logs of the overall activity of what's happening on a
20 BitTorrent network?

21 A. The tracker has some information about that in some cases,
22 although there has been some developments in BitTorrent that
23 make that harder to do. So I would generally agree with your
24 statement.

25 Q. Developments like encryption, that sort of stuff?

1 A. No. I mean like distributed trackers.

2 Q. Okay.

3 A. Encryption would, of course, help as well though.

4 Q. Right. But you agree that other than one peer's
5 interaction with another peer, that there's no place to go to
6 get records of what peers are distributing to each other on
7 your -- on a peer-to-peer protocol, correct?

8 A. You just asked that. So let me see if I can give you the
9 same answer. The tracker maintains some information about
10 that, but not all, generally speaking.

11 Q. Well, let me ask you this question.

12 A. Yes.

13 Q. If I see a Cox user distributing the file of a really
14 popular, let's say a Lady Gaga song, for example --

15 A. Okay.

16 Q. Right. And I want to get records of all the different
17 times that that Cox subscriber has distributed to other people.
18 There's nowhere I can go to get those records, right?

19 A. That would be extremely difficult, I agree.

20 MR. ZEBRAK: So, Your Honor, we're at good breaking
21 point if it makes sense.

22 THE COURT: Okay. Thank you.

23 All right. So you've got a long weekend, and I hope
24 that you enjoy it. I hope you don't do any research or
25 investigation or talk to anybody about the case.

1 I know you're interested in an update on where we
2 are, and I think we'll -- you know, we're hopeful that we'll
3 have closing arguments to you on Wednesday, and you'll begin
4 your deliberations on Wednesday. Okay? That's the best I can
5 do.

6 And, you know, there's -- obviously it's an important
7 case, and I think the lawyers have worked hard to try and get
8 the evidence to you and in the form that's appropriate. And so
9 I know this has been a lot of time, but I think that we'll be
10 able to get the case to you and for your deliberations on
11 Wednesday at some stage during the day.

12 All right. So I hope you enjoy the weekend, and
13 we'll see you Monday at 9:00. Does that work?

14 Okay. Thank you all. You're excused.

15 NOTE: At this point the jury leaves the courtroom;
16 whereupon the case continues as follows:

17 JURY OUT

18 THE COURT: All right. Mr. Feamster, you're in the
19 middle of your testimony. You are not -- you may speak with
20 your counsel about your testimony, not to be advised to change
21 any testimony. But if you have questions, certainly counsel is
22 available to you.

23 We'll see you at 9 o'clock on Monday morning. All
24 right?

25 THE WITNESS: Yes. See you then.

1 THE COURT: Does that work? Okay. All right.

2 You're excused. Thank you, sir.

3 THE WITNESS: Thank you much.

4 NOTE: The witness stood down.

5 THE COURT: All right. So we're going to have a jury
6 instruction conference. We'll take a short recess. Whoever is
7 responsible for filing an amended Cox revised proposed jury
8 instructions today, after I had gone through the other ones at
9 least five times, will be drawn and quartered on the courtyard
10 steps.

11 So give me a few minutes to look at these and we'll
12 come back. Let's take ten minutes, okay?

13 MR. BRODY: Yes, Your Honor.

14 THE CLERK: Judge --

15 THE COURT: Somebody wants to read in the exhibits
16 from the videos?

17 MS. LEIDEN: Yes, Your Honor.

18 THE COURT: Please, go ahead and do that.

19 MS. LEIDEN: For -- from the testimony of
20 Mr. Cadenhead, it was DX 72, DX 73 and DX 74A, which is pages
21 or slides 8 through 12 of original DX 74, and PX 286.

22 THE COURT: Is that it? Okay. All right.

23 MS. GOLINVEAUX: Your Honor, may I raise one other
24 issue briefly?

25 THE COURT: Yes.

1 MS. GOLINVEAUX: We had the issue of Mr. Jarchow, the
2 ICOMS administrator and the Cox billing reports.

3 THE COURT: Right.

4 MS. GOLINVEAUX: We sent over a proposed custodial
5 affidavit to opposing counsel yesterday in an attempt to
6 resolve the issue, and it addresses both the business record
7 foundation for the Cox Business names from ICOMS, and also the
8 issue that opposing counsel had identified that they were
9 concerned that there may be additional data in the ICOMS
10 database that identified whether the customers used the service
11 for public WiFi. And he confirms that it does not.

12 We've asked opposing counsel whether it resolves it.
13 They say they're still considering it. But since we're not in
14 court tomorrow, we'll be in a position where we have to fly him
15 over the weekend to testify if we don't get it resolved.

16 So I just wanted to raise it now.

17 THE COURT: Okay. So you're going to work on it
18 tomorrow and try and get it resolved?

19 MR. OPPENHEIM: Yes, Your Honor.

20 THE COURT: Yeah. And the same kind of advice, don't
21 bring somebody who has got a declaration that says I don't have
22 any idea how to answer the questions you want me to answer
23 because that -- you know, that's unnecessary. Okay?

24 MR. OPPENHEIM: Understood, Your Honor.

25 THE COURT: All right. All right, we're going to

1 take ten minutes. We're in recess.

2 NOTE: At this point a recess is taken; at the
3 conclusion of which the case continues in the absence of the
4 jury as follows:

5 JURY OUT

6 THE COURT: All right. I would like to use -- to
7 begin with, to work off of plaintiffs' jury instructions, which
8 is -- I normally do.

9 And I would assume that there's no objection to the
10 O'Malley federal practice instructions that both parties have
11 cited to with modest changes to fit the names of the parties in
12 this case.

13 Am I correct about that, Mr. Elkin?

14 MR. ELKIN: Your Honor, that's correct. And I want
15 to accept the blame for the late-minute filing. There was --
16 the night shift was busy last night, and we identified six
17 instructions that were inconsistent with what our current
18 thoughts were, or the Judge -- or you -- the Court had already
19 issued rulings, or thinks were out of the case.

20 So we just wanted to clean it up. But I apologize.

21 THE COURT: No, and I -- that was tongue in cheek.
22 There hasn't been a case, especially a complex civil case,
23 where I haven't gotten the instructions, the final instructions
24 at the last minute. And I was just giving you a hard time.

25 MR. ELKIN: Okay.

1 THE COURT: So, thank you, though.

2 So are there any of the general O'Malley instructions
3 that you -- either party wants to discuss?

4 MR. OPPENHEIM: I don't know through which
5 instruction Your Honor is referring. The first --

6 THE COURT: Well, go all the way through up to really
7 -- the only one in controversy is failure to call available
8 witnesses. Are you still seeking that? That's number 20 on
9 your list.

10 MR. OPPENHEIM: I had one suggestion on number 17, if
11 we want to take them sequentially.

12 THE COURT: Sure.

13 MR. OPPENHEIM: Your Honor, I apologize. I think in
14 number 17, it's the only party that's introduced in
15 interrogatory responses are plaintiffs.

16 THE COURT: Yeah.

17 MR. OPPENHEIM: So we should maybe just fix that so
18 instead of saying each party, it just says: Plaintiffs have.

19 THE COURT: I don't know whether you intend to
20 introduce any interrogatory answers or other discovery.

21 MR. ELKIN: It does relate to an issue that we want
22 to get to at some point concerning the copyright registrations.
23 Our position is -- we're still -- when we get to the damages
24 issue, there's still a Section 504(c)(1) issue.

25 And we have to sort through whether there are answers

1 to interrogatories -- I think it's answers to interrogatories
2 and not admissions in the deposition testimony. But we still
3 have to sort that out.

4 THE COURT: Okay. So No. 17 we'll put a hold on.

5 But I understand your proposed modification.

6 MR. OPPENHEIM: And then, Your Honor, I would --

7 THE COURT: 19 is -- let's go back to 18, testimony
8 and documents by lawyers.

9 MR. OPPENHEIM: So, Your Honor, I'm not -- with
10 respect to 18, I guess it probably makes sense to put a pin in
11 that until we deal with the DMCA safe harbor instruction where
12 I think we may have some discussion. And then -- if it's all
13 right with Your Honor.

14 THE COURT: Yeah, that's fine, let's go to 19, which
15 is your DMCA, which goes -- which works off of my BMG
16 instruction. And it essentially is the preliminary instruction
17 that I gave, with the addition of the 507(j), I think,
18 instruction.

19 MR. OPPENHEIM: So, Your Honor, in light of how the
20 case has come in in terms of evidence, there are really I think
21 two issues that are raised in terms of how we discussed the
22 DMCA. The first is that the jury has seen provisions of the
23 DMCA in certain documents, and heard testimony about it.

24 And I believe that the preliminary instruction that
25 was given was appropriate at the time, but now in light of

1 those documents and the testimony, providing some clarity to
2 the jury so they're not confused as to the difference between
3 your instruction and what's in those documents would be useful.

4 And so, we have a proposal we can hand up on that,
5 Your Honor, just trying to very much track the law a little
6 bit.

7 The second issue I think that's raised is --

8 THE COURT: So you have revised instructions?

9 MR. OPPENHEIM: We also worked the late shift, but
10 thought we would not submit it beforehand because we've been
11 working on it, Your Honor. Apologies. I can hand it up if you
12 would like, Your Honor.

13 THE COURT: Yeah, I need to see and read and touch
14 those things.

15 MR. OPPENHEIM: The second issue that we think is
16 raised by the DMCA is really a more fundamental one.

17 Cox has gotten up and argued very clearly and
18 solicited testimony from witnesses basically saying that an ISP
19 should not be held liable for the infringing acts of its
20 subscribers.

21 And that argument does not speak to any of the
22 elements of the law. It is, essentially, a request for jury
23 nullification.

24 And so, we think that the jury should be instructed
25 that in light of that argument, that they should follow your

1 instructions on the law of contributory and vicarious liability
2 so that they're not requested to nullify.

3 The DMCA -- and the law on this could not be more
4 clear. And we can cite many cases that speak to this -- was a
5 balancing act that Congress put forward to avoid an ISP
6 claiming that they shouldn't be held liable for the infringing
7 acts of their subscribers. It was meant to balance the rights
8 of copyright owners with the needs of an ISP.

9 And for the ISP to still make that argument, without
10 the jury being informed about the details of the DMCA, the
11 balance, and the fact that they at this point should only apply
12 the elements of contributory and vicarious liability, I think
13 would put the jury in a position of not understanding how does
14 that request, that argument about an ISP not being held liable,
15 how does it fit within the contours of this case.

16 THE COURT: Okay.

17 MR. ELKIN: We'll look at the instruction, but let me
18 say the following, if I could.

19 THE COURT: Yeah.

20 MR. ELKIN: We think the instruction that you gave --
21 Your Honor gave at the beginning of the case is the correct
22 one. And we most vehemently object to the -- any insinuation
23 that somehow the reverse is true. And that if we don't -- if
24 Cox doesn't qualify for the DMCA, it has -- it has essentially
25 no defense with respect to contributory or vicarious liability.

1 The section 512(l) of the DMCA could not be any more
2 clear. Even if Cox otherwise would have potentially committed
3 direct or indirect copyright infringement, the fact that we
4 completely -- even if we assert it in this case and lost, it
5 has no bearing at all on what the instructions are for the
6 secondary liability claims are and the defenses that we have.

7 Counsel can argue whatever he's going to argue with
8 regard to whatever Your Honor instructs the jury on, but I
9 think if you take a look at that statute, and you look at the
10 Fourth Circuit case in CoStar versus Loopnet, it's very clear
11 that failure to be able to claim safe harbor doesn't prevent
12 you from putting on defenses with respect to secondary liable.

13 And in fact, the -- Your Honor's instruction is very
14 clear, the opening instruction, I think the Court told the jury
15 that we don't have a safe harbor defense here.

16 He's free to argue whatever he wants to argue, but to
17 now sort of change the rules of the game because e-mails came
18 into the case -- it's not a big surprise that e-mails came in
19 referencing DMCA. We knew that was going to happen. It
20 happened in BMG. It's always going to happen with these
21 confined facts. And I think Your Honor dealt with balancing
22 the competing interests by giving that opening instruction.

23 THE COURT: Well, you know, the e-mails were
24 addressed pretrial. I made a ruling on those. I found that
25 they were relevant. And so, we did know that they were going

1 to come in, which is part and parcel of why I gave the
2 preliminary instruction, and also the statutory consideration
3 that indicates that it's -- that defendant still has the right
4 to defend the action under the DMCA.

5 When I looked at the other issue where you -- after
6 your -- I guess after your opening statement when I learned
7 really for the first time what your theory of the case was,
8 then, you know, I modified a ruling on admissibility of the
9 termination numbers.

10 And also, we were looking at -- I was looking at
11 statutory damages. I'm looking at, you know, the willfulness
12 issue, which is, I think, a very significant issue in this
13 case. And I think it bears on what Cox did and why they did
14 it, and whether it was willful, their conduct, or not.

15 You know, I think it's -- your defense is relevant at
16 least for that purpose. And that's why I gave the preliminary
17 instructions and have followed up with the various rulings I've
18 given.

19 We're going to talk about statutory damages, but
20 that -- I looked at those as being companion issues. And I
21 don't know whether you want to comment on that or not.

22 MR. ELKIN: Sure. I think with regard to -- so
23 statutory damages, I have several issues, and not necessarily
24 in any particular order. I guess the one that for us is the
25 most important in many respects because it deals with the scope

1 of potential exposure here is the shear number of works that
2 the jury gets to decide. If they find Cox liable, they can tag
3 a statutory damages award on.

4 And I know that Your Honor did not decide the issue,
5 the Section 504(c)(1) issue, on summary judgment, but now we
6 have a situation where clearly there are sound recordings that
7 were published as albums. We have corresponding music
8 compositions with sound recordings.

9 Assuming that Your Honor is going to -- if Your Honor
10 doesn't agree with our arguments, then it's really no issue.
11 But to the extent that Your Honor is inclined to consider that
12 issue, I -- the way I -- my experience in the past, not to say
13 that it matters to the Court, is that a lot of that can be
14 dealt with on a Rule 50 motion because it's going to be very
15 difficult and complex for a jury to follow all of that with the
16 evidence and looking at the certificates of registration.

17 But to the extent that that's not going to happen and
18 that goes to the jury, then being able to parse that -- they
19 did not have -- plaintiffs did not have in their jury
20 instructions, as I'm sure Your Honor observed, those issues.
21 And so, I definitely want to sort of take that issue up.

22 The other factors related to damages are, you know,
23 what the jury can consider on statutory damages, of course, and
24 the issue of willfulness and -- innocent infringement,
25 obviously, is out of the case, so we don't have to worry about

1 that.

2 And, you know, as far as willfulness, we made the
3 argument that Your Honor declined in BMG, and we appealed it
4 and lost that at the Fourth Circuit. I have to reserve on it.
5 I know what the decision here is, but if this case were to go
6 up to en banc or beyond that, I have to reserve on that.

7 THE COURT: Sure.

8 MR. ELKIN: So I'm not going to sit here and -- I'm
9 going to stand here and argue that, but I have to do that.

10 THE COURT: Okay.

11 MR. ELKIN: But with regard to the, you know,
12 statutory damages, I do think that the issues that we have
13 are -- I'm sure Your Honor is not going to be surprised to hear
14 this, you know, Cox's profits and size, we heard a lot of that
15 testimony the last couple of days, and also this notion that
16 they have in their proposed instruction about punishing, I find
17 that -- you know, that's also an issue.

18 I just want to make sure I'm sort of done.

19 THE COURT: Yeah, I mean, we'll revisit these later
20 instructions, so I'll ask you --

21 MR. ELKIN: Is that helpful? Is that what you wanted
22 to hear?

23 THE COURT: Yeah. Thank you. Let me hear from --

24 MR. OPPENHEIM: Unless the Court wants otherwise, I'm
25 going to limit my comment to just this safe harbor issue for

1 the moment.

2 THE COURT: Sure.

3 MR. OPPENHEIM: Not for a moment are we suggesting
4 that Cox can't make an argument that because it's an ISP, that
5 in terms of culpability, the jury can consider that, or
6 consider it in the context of willfulness or consider it in the
7 context of damages.

8 But the idea that they can argue that because they're
9 an ISP, they should never be held liable for the infringement
10 of their subscribers, doesn't go to any of the elements.

11 We're not suggesting they can't make the argument or
12 the argument should be disregarded --

13 THE COURT: I didn't hear that they should never be
14 held liable. And if you did, I think it was Zebrak, you know,
15 whispering in your ear.

16 MR. ZEBRAK: Well deserved, Your Honor, thank you.

17 MR. OPPENHEIM: I believe that the testimony of
18 Mr. Carothers was squarely to that point. And we can cite it
19 to the Court later if you would like, Your Honor.

20 THE COURT: I was thinking of the opening statement.
21 But -- okay.

22 MR. OPPENHEIM: So what we tried to do in that last
23 paragraph that we proposed here is not -- we're not trying to
24 reach, Your Honor. All we're saying is that to the extent that
25 you're considering that argument, you must follow the

1 instructions on the law of contributory and vicarious
2 liability. If you want to add in and, you know, statutory
3 damages, fine.

4 But the idea being that they need to look at that
5 argument within the context of the legal framework that you've
6 given. That's all we're suggesting, Your Honor. We think it's
7 an appropriate instruction to avoid nullification given the
8 evidence that's been suggested.

9 THE COURT: Okay. All right, we'll take it
10 understand consideration. And, obviously, we've got another
11 two days of testimony, and it may change things. So you be
12 mindful of that. And if you keep looking at it and think
13 instructions -- I hope to get you my proposed instructions
14 probably sometime on Monday. Tomorrow is a mess. But I would
15 hope that sometime on Monday we'll be able to get you proposed
16 instructions.

17 And to the extent you haven't had the opportunity to
18 object or -- I'll give you an opportunity to do that before we
19 charge the jury.

20 How about failure to call available witnesses?

21 MR. OPPENHEIM: Your Honor, in light of the testimony
22 by Mr. Zabek, and I believe Mr. Sikes, I believe it's
23 appropriate. They testified, Mr. Zabek -- I remember his
24 testimony very clearly. He said that he was willing to come,
25 he had an obligation under the agreement. And yet they didn't

1 call him.

2 So we would --

3 THE COURT: Okay. I'm not going to give 20. Your
4 exception is noted. They're outside the jurisdiction of the
5 Court. They're, you know, bound by employment agreements to
6 cooperate, but I don't read it as broadly. And they were --
7 their testimony was fully explored. And I don't think that
8 there was any prejudice to plaintiffs that they were taken by
9 deposition.

10 Exhibits will go back.

11 22 is the instruction on the definition of
12 "copyright." Is that -- is plaintiff still proposing the same
13 instruction, or do you have a revision on that one?

14 MR. OPPENHEIM: We're still good with that one, Your
15 Honor.

16 THE COURT: Okay. Then, Mr. Elkin, there's a
17 slight -- you've narrowed it just down to the set that you
18 think -- a couple that are most relevant to this case.

19 MR. ELKIN: Your Honor, I think some of this --
20 depending upon how we come out with regard to the -- some of
21 the other issues -- I'm not fussed about this. Really, it's
22 going to boil down to the extent to which -- what the jury is
23 going to consider in terms of the number of works.

24 But that's the only caveat that I had. But I have no
25 problem with this particular language.

1 THE COURT: Okay. So --

2 MR. ELKIN: Oh, I'm sorry. Mr. Eaton reminded me
3 that I misread the number because we have different numbering.
4 You were asking about the definition of "copyright." My
5 apologies to the Court. That's fine.

6 THE COURT: Okay. So why don't we bounce -- go
7 beyond the number of works, and go to direct infringement,
8 which is 25 by -- plaintiffs' 25.

9 MR. OPPENHEIM: So, Your Honor, we would offer one --
10 we're working on a revision in light of the testimony that's
11 just come in.

12 One minor modification to this, which is very
13 consistent with the law here, that says that the distribution
14 and reproduction -- apparently I have language. I didn't
15 realize this. I apologize.

16 THE COURT: If you find that they uploaded or
17 downloaded copyrighted works without authorization?

18 MR. OPPENHEIM: Just to add the language "all or part
19 of plaintiffs' copyrighted work." Because, obviously, you can
20 engage in an infringement without reproducing or distributing
21 the entirety of the work.

22 And I think, with your permission, Your Honor, I can
23 hand up that proposal.

24 THE COURT: Yeah, certainly.

25 MR OPPENHEIM: Which I didn't even realize we had

1 until right now. One from us as well.

2 THE COURT: Thank you.

3 MR. ELKIN: So, Your Honor, I guess there are two
4 issues here. One is something I -- we did raise on our Rule 56
5 motion, this offer to upload that I know Your Honor addressed
6 in the BMG summary judgment motion.

7 THE COURT: Yeah.

8 MR. ELKIN: So we clearly are looking to have that
9 addressed in this instruction. The concern I have with "a part
10 of," it's -- I think it's a slippery slope. We know, as a
11 matter of copyright jurisprudence, if it's de minimis, there's
12 no liability.

13 I'm not quibbling with regard to the fact that you
14 need to have the entirety, but I think that it's a little
15 fuzzy, and I do worry about that.

16 MR. OPPENHEIM: Mr. Elkin and I agree that,
17 obviously, a de minimis would not necessarily constitute
18 infringement. I don't think that that's raised here, but we
19 can work on that together.

20 THE COURT: Okay.

21 MR. OPPENHEIM: And refine that if the Court would
22 like.

23 THE COURT: Yeah, certainly. If you can work
24 together on the instruction, we'll be happy to get one that's
25 agreed versus not agreed. So we'll put a place holder on

1 direct infringement.

2 Contributory, number 26.

3 MR. ELKIN: Well, the -- this is one of the ones
4 where we had modified because willful blindness is now out of
5 the case since that has been -- that knowledge has been decided
6 on summary judgment.

7 Again, and not to be overly academic about it, but I
8 think that in the BMG case it was argued before Your Honor, the
9 substantial non-infringing uses should have been proposed
10 and/or used. That was rejected by the Fourth Circuit, as Your
11 Honor well knows.

12 To the extent that there is review beyond that,
13 assuming it were to go up, we just want to reserve on that.

14 THE COURT: Okay. All right. Well, I'll look at
15 your revised Cox jury instruction 27, although it looks like
16 there haven't been too much in the way of revisions. But I
17 think the plaintiff has laid out the contributory infringement
18 as the Fourth Circuit has instructed. But I'll look at that a
19 little bit more.

20 Vicarious infringement.

21 MR. ELKIN: Yes, Your Honor. I think we have two --

22 THE COURT: Was this modified by plaintiff at any
23 time since this was filed? Do you have a revised --

24 MR. OPPENHEIM: No, no, Your Honor.

25 THE COURT: Okay, good. Then go ahead.

1 MR. ELKIN: So I have two -- I guess two the issues I
2 have here, one is they are seeking to impose a direct factual
3 finding about what is the right and the ability to control
4 infringing activity.

5 I think that Your Honor hit it right in the opening
6 instruction, although I think there was a slight typo in the --
7 it said "right in the ability," but I think it should have been
8 "and," but I thought that was the right --

9 THE COURT: Okay.

10 MR. ELKIN: With the one caveat that I'll get to in a
11 moment. But to the extent that Your Honor in denying Cox's
12 motion for summary judgment in BMG, denied that motion and made
13 a reference that the jury could decide that if they found that
14 Cox had the ability to suspend or terminate, that could be a
15 basis.

16 But that was a decision that the Court made as to why
17 you were denying the motion for summary judgment. You were not
18 deciding the case in favor of BMG on that ground. And,
19 obviously, plaintiff is entirely able to argue to the jury, I
20 suspect that they will, that that gives Cox the ability to
21 supervise, but to be able to say, this is the standard as a
22 matter of law, is a bridge too far. And there's no precedent
23 for that, notwithstanding that was the basis upon which you
24 denied Cox's motion for summary -- affirmative summary
25 judgment.

1 The only issue about which I would quibble with
2 regard to the opening instruction is the absence of the word
3 "direct financial benefit."

4 THE COURT: Financial benefit.

5 MR. ELKIN: There's a -- as Your Honor, I'm sure,
6 well knows, there is a Fourth Circuit case that we've cited
7 that says an obvious and direct financial benefit -- I think
8 it's the Salabes case.

9 THE COURT: Yeah.

10 MR. ELKIN: It's the Nelson-Salabes, S-a-l-a-b-e-s,
11 versus Morningside Development, 284 F.3d 505. It's a Fourth
12 Circuit 2002 case where the Court held that in order to
13 establish vicarious liability, I'm going to skip the first part
14 of it: It possessed an obvious and direct financial interest
15 in the exploited copyrighted materials.

16 I would just call that to Your Honor's attention.

17 THE COURT: Yeah. And plaintiffs used "direct
18 infringement" and "detiment financial interest" in their
19 instruction as well. So I think we're there.

20 How about the -- in your instruction, you have third,
21 that Cox had the right and practical ability to supervise the
22 direct infringement. Where does "practical" from?

23 MR. ELKIN: So that comes from the -- it's borrowed
24 from the Ninth Circuit, Perfect 10 versus Amazon. And the
25 courts here have, you know, and other places around the country

1 have followed that language. And I would commend that to the
2 Court's attention.

3 THE COURT: Yeah. It got me in a lot of trouble in
4 the BMG case following the Ninth Circuit instructions.

5 MR. OPPENHEIM: And I'm not sure that the Ninth
6 Circuit has consistently used that language, Your Honor. In
7 fact, I think not.

8 THE COURT: Okay. All right. Well, we'll look at
9 that. And I understand your argument. And I -- you know,
10 I'm likely that I'll take the language out regarding this
11 specific right and ability to suspend or terminate accounts.
12 And that's argument I'll save for counsel. And I'll modify and
13 make sure that it contains the word "direct."

14 MR. OPPENHEIM: Maybe, Your Honor, then, we would
15 consider, in the alternative, the Grokster language from the
16 Supreme Court about right to stop or limit it.

17 THE COURT: Right to do something about it? Yeah,
18 right to --

19 MR. OPPENHEIM: I'm sorry. Maybe I was too
20 shorthanded.

21 THE COURT: Yeah.

22 MR. OPPENHEIM: I think that the language that
23 Grokster -- the Supreme Court used in Grokster was: One
24 infringes vicariously by profiting from direct infringement
25 while declining to exercise a right to stop or limit it.

1 Right. So to the extent that we're going to take
2 this out, maybe that's something we should consider. Generally
3 a good authority to look to for these things.

4 THE COURT: It's a little safer, yeah.

5 MR. ELKIN: Yeah, so we -- Grokster, obviously, was a
6 case that turned on inducement. And as a -- from a
7 contributory liability point of view, clearly if we're going to
8 go to Grokster, then the substantial non-infringing use is
9 something, again, we would commend to Your Honor's attention.

10 But I think Grokster has certainly spent a -- it
11 permeates this courtroom, I'm sure.

12 THE COURT: If you had any idea how many times that
13 counsel came up to the podium and lectured me on Grokster, I
14 mean, it was amazing, and it was a terrific case, and --

15 MR. OPPENHEIM: Thank you.

16 THE COURT: -- stood at a time. Okay. At the time
17 it was decided, it was very important. And we've gone a little
18 bit farther down the road in the years since, which we dealt
19 with, in part, in BMG. And we continue to go down farther down
20 the road.

21 Okay. Let's go to -- so -- all right. Why don't
22 we -- why don't you give me your argument on the -- how you
23 want this number of works, Mr. Elkin, to work before we get to
24 damages.

25 MR. ELKIN: So I -- so what I would propose to do is

1 to -- I think that the copyright registrations are plain, and
2 the law is plain, and Your Honor could decide it in our favor
3 or not in our favor.

4 I, frankly, would rather have it decided one way or
5 the other on Rule 50 because it's going to be very complex to
6 take the jury through it, although I'm prepared to do it with
7 the right instructions.

8 THE COURT: How does it play into the rulings I've
9 already made?

10 MR. ELKIN: Well, Your Honor hasn't decided -- I
11 mean, let's just take a step back.

12 The plaintiff is able to recover on as many works
13 that the jury can find Cox has either contributorily or
14 vicariously infringed.

15 THE COURT: Right.

16 MR. ELKIN: And so, the issue -- and, frankly, if
17 they were pursuing compensatory damages, this is really not an
18 issue, right, because they were able to pursue damages on all
19 of those works.

20 But they're electing, which is their right, to pursue
21 statutory damages. And the first -- and section 504(c)(1) says
22 that if you -- all parts of a compilation get merged into one
23 statutory damages award.

24 And I think the language is not only clear, there has
25 been a lot of cases, and we cited them -- I think I -- we both

1 argued before Your Honor at the Rule 56 motion, whether it's
2 MP3 tunes or otherwise. And the -- and this has been, you
3 know, debated in the halls of Congress. This is not a subject
4 that's been lightly covered.

5 And the issue here, it's -- in many respects, this
6 case is easier than the case that you had before Your Honor in
7 BMG when you're dealing with music compositions, which is far
8 more murkier.

9 Here where you have sound recordings that are
10 typically, they're published as an album or a CD, and where
11 they are embodied on a certificate of registration, the only
12 way you get the ability to put them on a registration is if, by
13 force of nature, they are a compilation.

14 So all of the -- if there are ten songs that are in a
15 registration that is identified as such -- and there really
16 can't be any genuine issue as to whether or not the
17 certificates include the songs -- there's only an
18 identification of those songs in -- you know, as part of the
19 infringing works here.

20 What we had hoped to do, you know, at the close of
21 our case is to be able to hand up a schedule and point to the
22 evidence and to, you know, make a request for Your Honor to
23 rule on that.

24 But in the absence of that, we would ask for an
25 instruction, you know, consistent with what we've proposed, and

2305

1 the same could be said with respect to the music composition.
2 You didn't have sound recordings and music compositions in BMG,
3 but here, you know, we can identify the music composition that
4 correlates to a sound recording.

5 And to the extent that we can do that, they don't
6 have to be on the same registration because they, wouldn't be,
7 obviously, because it's not a PA versus an SR, those would be
8 sort of the subject either as part of our Rule 50 motion or
9 part of the instruction.

10 Personally, I'd rather not spend as much time in the
11 closing argument to have to go through all that, so this is a
12 little bit of a selfish request. But if Your Honor gives that
13 instruction and doesn't rule on the Rule 50 motion, then I
14 think I need to do that. It's a lot of exposure for Cox, and
15 I've got to do my job.

16 THE COURT: Yeah. Okay. So that's 31, 32 -- yeah,
17 31 and 32 where you deal with number of works, compilations,
18 and recordings and compositions and, again, number of works.
19 Okay.

20 MR. ELKIN: Thank you, Your Honor.

21 THE COURT: All right.

22 MR. OPPENHEIM: So I think, Your Honor, with respect
23 to both the compilation issue and the composition, sound
24 recording issue, there's a pure legal argument as to why the
25 instruction shouldn't be given, which we've made to Your Honor

1 before in the context of summary judgment, and we can make
2 again.

3 But at this moment, the more, I think, compelling
4 reason that these instructions shouldn't be given is that there
5 has been zero testimony elicited on any of these issues or
6 evidence presented to the jury by which they could consider
7 this.

8 So Your Honor denied the defendants' summary judgment
9 motion on this. So the -- so it was -- it's been incumbent on
10 them to present a case factually that the jury could consider
11 this. And they have not done that. There have been no --
12 there has been nothing on their side on this.

13 In the meantime, the plaintiffs have presented
14 witnesses who have talked about the independent value of the
15 works. That they are sold -- that albums and tracks are sold
16 separately and differently. That music publishers and record
17 companies are entirely different entities that do different
18 things. And that the values of those compositions and the use
19 of those compositions are entirely different than the value and
20 the use of the sound recordings.

21 So we've made a case that everything that we've put
22 forward in the 10,000 works is appropriately there.

23 Cox has presented no evidence in support of either of
24 these positions. And to give the jury an instruction on this
25 as they're suggesting, in light of the fact that there's no,

1 absolutely no evidence, would be inapposite and just confuse
2 the jury, I believe, Your Honor.

3 MR. ELKIN: It may shock the Court, but I actually
4 hadn't forgotten about putting on evidence with regard to this.

5 I think, as I mentioned a few minutes ago, we have
6 requests for admissions, answers to rogs. And if we needed to,
7 we can rely on the deposition testimony because they're
8 admissions. But they're certificate of registrations. So
9 plaintiff need not worry, we understand that we have the burden
10 to put in that evidence.

11 THE COURT: Okay.

12 MR. OPPENHEIM: I don't know what the intent is with
13 respect to depositions. We've put representatives of the
14 companies on the stand. They've had opportunities to examine
15 them. They haven't asked questions --

16 THE COURT: Well, you know -- there's more to come.

17 MR. OPPENHEIM: There is more to come and maybe,
18 maybe the landscape changes. But as of right now, Your
19 Honor --

20 THE COURT: All right. I'm on notice. We'll deal
21 with that the beginning of next week. And I'm happy to look at
22 it again as a matter of law, or whether I decide it needs to go
23 to the jury, we'll look at it and continue to consider it.

24 MR. OPPENHEIM: Not that I want to burden Your Honor
25 with additional briefing, but if you would like additional

1 briefing on the issue, we're happy to submit it.

2 THE COURT: I think the summary judgment pleadings
3 were pretty complete. So I'll go back and look at those. If I
4 need something, I'll let you know.

5 MR. OPPENHEIM: Okay.

6 THE COURT: Okay. All right. The effect of
7 instructions as to damages I think is pretty bland, and both of
8 you put in pretty close to the same thing.

9 Damages generally.

10 So let's go to statutory damages. Mr. Oppenheim,
11 have you revised your instruction 30?

12 MR. OPPENHEIM: No, we have not, Your Honor. I can
13 respond briefly to the issue that Mr. Elkin raised previously,
14 which is the factor of punishment.

15 I believe the case law on this is clear, Your Honor.
16 We're happy to submit another bench memo on it. But that the
17 jury gets to consider the issue of punishment, especially in
18 the case where there may be a finding of willfulness.

19 And that's particularly appropriate in this case,
20 Your Honor, we believe, given the evidence that's come in.

21 THE COURT: Well, in your sixth bullet point in your
22 instruction, you say: Whether Cox acted willfully or
23 intentionally in contributorily or vicariously infringing.

24 Did you mean for the word "intentional" to be in, "or
25 intentionally"?

1 MR. OPPENHEIM: That's probably not well written,
2 Your Honor, and we should revise that.

3 It really is trying to get at the issue of the
4 defendants' culpability. And I would agree the "intentionally"
5 is probably not the appropriate word there.

6 THE COURT: Okay. All right.

7 MR. EATON: Geoffrey Eaton, E-a-t-o-n.

10 THE COURT: Welcome.

13 We have a couple of issues on this instruction. I'll
14 deal with that.

15 But the one counsel was just speaking of first on the
16 punishment issue. That's inflammatory language, Your Honor.
17 We haven't found any precedents that use it. It's really only
18 relevant -- even their instruction says it's only relevant to
19 willfulness. And they've already got willfulness in their
20 bullet list.

21 And it's also -- you know, the punitive function of
22 statutory damages is itself largely about deterrence. And
23 they've got a separate bullet on deterrence that we don't
24 disagree with either.

25 So they're doubling dipping or possibly triple

1 dipping on adding punishment on top of willfulness and
2 deterrence.

3 I haven't seen anything -- I haven't seen this used
4 anywhere. You didn't use it in BMG. So it strikes us as being
5 a provocative thing to put in this instruction, and we're
6 opposed to it.

7 There's a couple of others on this that we would like
8 to address. The sort of guts of this instruction are pretty
9 similar between the two parties. So these are just kind of
10 extraneous things at the end. There's a couple that we --
11 there's one that we think ought to be in there that isn't in
12 theirs, and a couple that's in theirs that we think ought not
13 to be.

14 The one that's in ours that we -- that they omitted
15 is including mitigation, failure to mitigate in the bullet list
16 of considerations.

17 There was such a bullet in the BMG case, Your Honor.
18 You know, we were allowed to put on evidence of failure to
19 mitigate. So it's in the case. So it's appropriate to include
20 here.

21 There are a bunch of other arguments. They just
22 filed a bench brief on failure to mitigate, so we're going to
23 talking about this at some more length, but as of -- the way
24 the case currently stands, it's clearly appropriate here.

25 With respect to their proposed instruction, there are

1 a couple of other things that we -- that we would take issue
2 with. One Mr. Elkin raised earlier, which is the question of
3 Cox's total profits. That's another kind of unicorn that we
4 haven't seen used in model instructions or in actual
5 instructions anywhere.

6 And it's inappropriate for a whole bunch of reasons.
7 One of which, Your Honor, is if you look back at the list, the
8 shared list of bullets that both parties agree on and the ones
9 that you gave in BMG, they already take account of profits.
10 But they only take account of profits to the extend they're
11 earned because of the infringement. That's what the
12 instruction already says. That's relevant, everybody I think
13 agrees about that.

14 And they're trying to explode this out to get a big
15 number in there before the jury. We think that's
16 inappropriate, Your Honor. It's an invitation to punish Cox
17 for being a big company rather than to punish Cox for the
18 narrow band of accused infringing activity that's at issue
19 here.

20 And at a minimum, Your Honor, we're staunchly opposed
21 to including this, but if you were to include it, at a minimum
22 you would have to specify what entities you're talking about.
23 A lot of numbers have been thrown around in court, some as high
24 as 20 billion. You would have to focus it very carefully on
25 the entities that are actually accused of infringement here. I

1 don't know what that number is. I don't think any of those
2 numbers should get into this instruction.

3 But at minimum, you would have to be a lot more
4 specific about it than they've been here.

5 The last issue, Your Honor, and probably the hardest,
6 their instruction includes, and ours does not, a number -- a
7 couple of sentences that speak to the relationship between
8 actual damages and statutory damages. Some of that you
9 included in your BMG. Some of is it in some model
10 instructions. Some don't have it.

11 We think it's inappropriate here for a couple of
12 reasons. The -- there are authorities in this Court, in
13 copyright cases, that use a principle of proportionality in
14 dealing with the relationship between actual damages and
15 statutory damages. There's the Dae Han Video case, which I
16 think is 1990. I have the cites over there, I'll have to pull
17 them for you. And the Seoul Broadcasting Systems case, which
18 is just five years ago, or four years ago, I think, where they
19 both said that statutory damages have to bear a relationship to
20 actual damages.

21 And I think Judge Brinkema even said that actual
22 damages have to serve as a floor for any statutory damages that
23 are recovered.

24 So it's very difficult to square that proportionality
25 principle with a blanket statement that they don't have to show

1 any kind of harm whatsoever to get statutory damages.

2 And just to be clear, we're not arguing that the jury
3 should be instructed contrary, that they should not be
4 instructed that the plaintiffs have to show actual damages to
5 get statutory damages. We're suggesting that telling them
6 affirmatively that information the way it's been phrased here,
7 without any evidence of any concrete, anyway, evidence of harm,
8 is an unnecessary invitation to an excessive award that betrays
9 that proportionality principle that this Court --

10 THE COURT: So reason that I think it's in here is
11 that the testimony in the trial has been, we can't prove actual
12 damages, there's no way to do it. And even Dr. Feamster
13 agrees, you can't locate those numbers.

14 So how does that factor into your --

15 MR. EATON: Your Honor, I would say that I think --
16 obviously, this is -- the intersection of these two things is
17 complicated. I think the answer to that is probably that to
18 the extent they haven't even attempted to show any actual harm,
19 then perhaps the proportionality principle would require
20 minimum statutory damages in those circumstances.

21 Otherwise, it's just free play on that issue. And I
22 don't think that's consistent with the way that issue has been
23 handled in other cases in this court.

24 THE COURT: Well, but the broader world outside of
25 this courthouse says, and sometimes anecdotally, but more other

1 times with more specificity, that if you can't prove actual
2 damages, then you go to statutory damages, and here's the
3 options that you have. Right?

4 MR. EATON: True. But those cases all also say, and
5 I think the instructions that everyone here agrees are correct
6 all say, that actual damages are relevant to the determination
7 of statutory damages.

8 So the nexus of these things is a little hard to work
9 out. We think that the way they've phrased theirs, it's an
10 invitation to an excessive award, and we would be object to it.

11 Counsel.

12 THE COURT: Thank you.

13 MR. OPPENHEIM: So, Your Honor, let me -- I think
14 there were four issues there. Let me pick up with the last one
15 first, which is the issue of the relationship between actual
16 damages and statutory damages.

17 The Supreme Court in Woolworth has been very clear
18 about this, and this still remains good law and is cited
19 throughout the country. And the Woolworth decision says that a
20 copyright plaintiff need not show any actual harm or actual
21 damages in order to obtain statutory damages. And that's the
22 law. And any court that cites -- says otherwise is ignoring
23 that Woolworth decision.

24 I believe the proportionality issue that opposing
25 counsel is citing to is more in the context of a due process

1 argument.

2 Now, I am not aware of the Fourth Circuit ever taking
3 up the issue of due process in a copyright statutory damages
4 case. I am, however, aware that it's gone up both in the First
5 Circuit in the Tenenbaum case and in the Eighth Circuit in the
6 Jammie Thomas case. And in both those instances the Court said
7 that the due process limitations of proportionality did not
8 apply to statutory damages because of Woolworth.

9 So I don't believe that that law that's been cited is
10 law with regard to copyright. So that's --

11 THE COURT: All right. So narrow it down. And now
12 deal with cases where there are -- or, you know, believe to be
13 actual damages, but the plaintiff seeks statutory damages
14 instead. And how does it play in there?

15 MR. OPPENHEIM: So, the law also says that a
16 copyright owner gets the right to elect statutory or actual
17 regardless of what the evidence or the circumstances may be.
18 Even if we could show actual damages, we would have the right
19 to present or to seek statutory damages.

20 Now, the defendants would have the right to say, in
21 considering what the statutory damages are, the jury should
22 consider what evidence you heard on actual damages or the harm.
23 And the jury would get to consider it, and it's a factor.

24 Now, here unfortunately, as everybody has testified,
25 there's no ability to do that.

1 THE COURT: So the plaintiffs are going to propose \$1
2 a work because that's what consumers pay for iTunes. And is
3 that evidence that you believe that -- well, I mean --

4 MR. OPPENHEIM: I assume you mean defendants are
5 going to propose, because we're certainly not going to propose
6 that.

7 THE COURT: No, no. Yeah, sorry.

8 MR. ELKIN: That would be Chris Tregillis who will
9 testify early next week.

10 THE COURT: I'm familiar with that testimony. And I
11 apologize. The defendant.

12 MR. OPPENHEIM: That's all right. It's been a long
13 week, Your Honor. Two weeks.

14 Look, the jury is going to consider that. The jury
15 is going to consider that. And we're going to argue it. And
16 it's a factor the jury can consider.

17 But the instruction needs to be given that -- and
18 this is in other copyright cases, including the Jamie Thomas
19 case, including the Tenenbaum case, the First Circuit and
20 Eighth Circuit cases I just cited to, this was the exact
21 situation. Those were peer-to-peer copyright infringement
22 cases where there was copyright statutory damages sought, and
23 there was no proof of what the actual harm was.

24 Now, the other side argued exactly as Mr. Elkin
25 intends to argue to the jury. And that is, you know, a dollar,

1 or 99 cents a song, or 79 cents a song, whatever he's going to
2 argue -- and he can argue that. And in both of those cases the
3 courts observed exactly what I am suggesting to Your Honor now,
4 which is that the jury should be told that they should award
5 statutory damages whether or not there is evidence of actual
6 damages suffered by the plaintiffs. And that the not -- the
7 statutory damage award need not be based on the actual damages.
8 Because the whole concept of statutory damages is to encompass
9 all of these other factors.

10 THE COURT: Yeah, understood. Okay.

11 MR. OPPENHEIM: Okay. So that was issue one. I'll
12 try to move more quickly through the other three issues that
13 were hit, Your Honor.

14 Deterrence and punishment. Those are two very, very
15 different things. Go back to our old philosophy days from
16 college, Hobbs talked about deterrence. Others -- you know,
17 and punishment. They're very different things. And the jury
18 should get to consider them differently.

19 What it takes to punish a defendant is very different
20 than what it may take to deter a defendant. And so, courts are
21 generally instructed on both. And we're happy to submit some
22 authority to the Court over the weekend on this issue to help
23 advise it, if the Court would like.

24 THE COURT: Yeah, that'd be fine if you want.

25 MR. OPPENHEIM: On the issue of --

1 THE COURT: I don't need the definitions of the
2 terms, it's what I do every Friday.

3 MR. OPPENHEIM: Yeah, you're right, Your Honor. I
4 apologize.

5 Cox's profits. Look, Cox's profits go directly to
6 the issue of deterrence, go directly to the issue of
7 punishment. And the jury has to consider what Cox's profits
8 are in the context of addressing those issues. This is a
9 company that while the record -- and the evidence came in on
10 this. The record companies in a ten-year period lost half
11 their market size. This company was putting profits, over a
12 billion dollars a year, in their pocket. And that's something
13 that the jury should get to consider in those factors.

14 On the issue of mitigation. The bench memo we've
15 submitted, Your Honor, not only rejects the notion of a
16 mitigation instruction when it comes to statutory damages, but
17 in fact, quite to the contrary, an instruction should be given,
18 Your Honor, that mitigation -- that you cannot suggest to the
19 jury that the plaintiffs' failure to sue the direct infringers
20 should be held against them for purposes of either determining
21 liability or damages.

22 It is very clear in the case law that a copyright
23 owner does not need to sue the direct infringers in order to
24 pursue a secondary case. Because if it were otherwise, you
25 would never have a secondary case. It just cannot be.

1 And so, the Grokster decision, which Your Honor has
2 read many times, and I hate to be that lawyer who comes up on
3 it again, it directly addressed this and said, there are
4 instances, I'm paraphrasing, right, where it's appropriate to
5 pursue secondary claims instead of the direct infringers. And
6 this is just one of those instances.

7 So to suggest to the jury not only that they can
8 consider mitigation, but that they should consider it in the
9 context of liability and damages, is contrary to the law.
10 There is no authority to support that, Your Honor.

11 THE COURT: Okay.

12 MR. ELKIN: Very briefly, Your Honor.

13 THE COURT: Yeah.

14 MR. ELKIN: So I think Mr. Oppenheim is conflating
15 the due process argument with our constitutionality argument,
16 which we won't be able to address until after the jury returns,
17 if they do.

18 The notion with regard to loss itself is -- it's a
19 separate issue.

20 I think with regard to mitigation, I -- if I have an
21 -- I will take a look at the bench memo and we'll --

22 THE COURT: Yeah, and we'll give you an opportunity
23 to respond if you want.

24 MR. ELKIN: It looks like a rehash of the Rule 56
25 motion on it. I think there is ample authority in this circuit

1 with regard to mitigation. There is no per se rule in favor of
2 or against pursuing, you know, whatever the mitigation is in
3 any particular set of circumstances.

4 So, you know, the -- you know, we each were -- the
5 summary judgment motions were argued and decided and -- but
6 this seems, to me, to be more of a motion for reargument.

7 What I would say, separate and apart from the
8 mitigation issue, and this is where I thought counsel was
9 going, is that -- and I don't think he's gone this far, at
10 least, that in any statutory damages instruction, regardless of
11 whether or not we're in a circuit, which we are, where
12 mitigation can be an affirmative defense, a jury can always
13 consider mitigation in deciding where in the continuum of
14 statutory damages an appropriate award would lie.

15 But they seem to be making an argument, and again,
16 it's just a quick glance at their brief, that somehow the
17 Petrella case in the Supreme Court, which is a laches case,
18 sort of preempts any notion of copyright liability within the
19 statutory period. It doesn't. There's no precedent for that.

20 THE COURT: Okay. All right. Well, I'll continue to
21 look at that. And if you feel that -- and I'll look at the --

22 MR. EATON: Your Honor, if I may?

23 THE COURT: -- prior pleadings. Mr. Eaton.

24 MR. EATON: Very briefly. I just want to make sure I
25 make a record on this. There's one that I neglected to

1 mention.

2 Which is that their instruction includes in their
3 list of considerations, the effect that the award may have on
4 other Internet service providers in the marketplace. That's
5 another novel construction. That seems to me to be an
6 invitation to make Cox sort of the whipping post for the entire
7 industry. And we object to its inclusion.

8 THE COURT: Okay. I didn't even notice that one.

9 Where is that?

10 MR. OPPENHEIM: It's next to the "profits" language,
11 Your Honor, I believe, on the second page of -- if I recall
12 correctly. So it's on page 36 of the plaintiffs', I believe.
13 And the -- so you see at the top of 36, it says: In
14 considering what amount would have a deterrent effect -- so
15 this is with respect to deterrence -- you may consider Cox's
16 total profits and the effect --

17 THE COURT: How many other internet service --

18 MR. OPPENHEIM: -- the award may have on other
19 Internet service providers in the marketplace.

20 Your Honor, in light of all of the testimony that's
21 been elicited about other ISPs, we think that this is
22 appropriate.

23 THE COURT: That's pretty broad.

24 MR. ELKIN: One thing I neglected to mention, Your
25 Honor, but I do think Mr. Eaton mentioned it, wherever Your

1 Honor goes with regard to Cox's profits, it has to -- it can't
2 be an all-enveloping \$20 billion company untethered to whatever
3 entities are actually being sued here.

4 THE COURT: Yeah, it certainly should.

5 Okay. Willfulness. We've got 31, number 31 for
6 plaintiffs.

7 MR. ELKIN: So I think with regard to willfulness, I
8 tried to address it at the outset. An argument was made in BMG
9 that the instruction should focus on the intent of the
10 secondary infringer as opposed to the primary infringer. Your
11 Honor didn't accept that. The Fourth Circuit agreed with you.
12 If I thought there was a way convince you, I would try. But I
13 just want to reserve on this for the reasons I mentioned.

14 THE COURT: Yeah. Okay. I appreciate that.

15 Yeah, I, as you might understand, am going to
16 closely, as closely as possible, agree with the Fourth Circuit.
17 It's a much healthier way to proceed. I have too many cases
18 already without worrying about getting them back on a regular
19 basis.

20 All right. Cox's burden of -- oh, no, that doesn't
21 apply. All right. Then what other instructions do you want to
22 talk about tonight?

23 Mr. Eaton, would you get those cites on the
24 courthouse so -- the Dae Han and Judge Brinkema's case, if
25 you'll get those for us.

1 MR. EATON: I can read them in now, or do it after
2 we're done here, Your Honor.

3 THE COURT: Sure, just read them.

4 MR. EATON: Make sure they get it. The first is Dae
5 Han Video Production versus Chun. The citation is -- oh, there
6 we go. It's a Westlaw cite. It's 1990 Westlaw 265976. And
7 the other, Seoul Broadcasting System International versus Young
8 Min Ro, also a Westlaw citation, it's 2011 Westlaw 3207024,
9 2011.

10 THE COURT: Okay. Good. Thank you.

11 All right. Any other instructions we want to look at
12 tonight?

13 MR. EATON: One quickly, Your Honor. I think this
14 may be aborted. But on mitigation, we were -- we've submitted
15 it, I don't know if you had a chance to review the red line
16 that we put in, we submitted a new instruction on mitigation
17 because we realized, belatedly, that when we did our jury
18 instructions and our verdict form, we had competing
19 understandings of how the mitigation instruction should read.
20 So we've tried to conform it.

21 The major issue is whether or not the jury is asked
22 to calculate an amount to reduce damages by. It appears that
23 they have just filed a brief that addresses this very issue.

24 So it seems to me, and with Mr. Elkin's permission,
25 that we should probably just reserve on this until we've had a

1 chance to review what they've submitted.

2 THE COURT: Okay.

3 MR. EATON: Okay.

4 THE COURT: That's fine.

5 MR. OPPENHEIM: Obviously, Your Honor, we just
6 received this red line at the same time you did.

7 THE COURT: Right.

8 MR. OPPENHEIM: And so when we submitted our brief,
9 we had not looked at their proposal. So we'll take a look at
10 that and see if there's anything else we need to address.

11 THE COURT: Okay. Then I'll look at the summary
12 judgment pleadings again as they apply to some of the
13 instructions. And you will file a brief on mitigation in
14 response to them if you'd like to.

15 And we'll look at the other comments you've made, and
16 I think probably -- I don't know whether Monday night's too
17 early or Tuesday night, but we need to see where we're
18 evolving.

19 And you need, to the extent you can agree on one or
20 more of the instructions as you've talked, please let me know.
21 And I'll continue to compile a proposed jury instruction list.

22 And what else do we need to do before Monday morning?

23 MR. ELKIN: Will do, Your Honor. Thank you for that.

24 THE COURT: Okay.

25 MR. ELKIN: I guess the only issue that -- I don't

1 know whether Your Honor at some point intends to take up the
2 proposed verdict sheet with the parties or not.

3 THE COURT: You know, I will, but let's do that
4 Monday. I haven't -- you know, I saw it and I looked at it,
5 and I put it aside, and I have no idea what they say right now.
6 So --

7 MR. ELKIN: Okay.

8 THE COURT: But I appreciate the fact that you did it
9 already. And they both -- they weren't very -- they weren't
10 substantially different.

11 MR. ELKIN: We can take Your Honor through it when
12 you're ready. And some of it may be affected by your
13 consideration of the issues that we've just argued this
14 evening.

15 THE COURT: Right. The number of works, right.
16 Okay. I do remember that.

17 MR. OPPENHEIM: I was pleasantly surprised that we
18 were not further off. And I do think that once we resolve
19 issues on mitigation and the SR/PA issue, and the compilation
20 issue, that that'll -- that should help us then be at a point
21 where we can come to resolution maybe.

22 THE COURT: Okay. All right.

23 All right. Then, well, thank you. We'll see you all
24 on Monday morning. If you get something in mind that you think
25 needs to be filed before Monday morning, please don't hesitate.

1 Nothing would make us happier than have 40 or 50 pages of
2 briefs filed on Sunday afternoon.

3 But, no, let's make sure -- the goal is to get the
4 case to the jury and for us to be inconvenienced, but not them
5 be inconvenienced. They're doing a great job and they're
6 staying with us. And they were relieved to hear, I think, that
7 we would have the evidence done by Wednesday.

8 And if we wind up all day Tuesday arguing about new
9 issues, that won't help. So we're happy to work off hours to
10 make sure that we've raised every issue we need to raise, and
11 made the decisions I make hopefully correctly, and we'll go
12 from there. Okay.

13 MR. OPPENHEIM: Your Honor, may I ask one question
14 before --

15 THE COURT: Yes, sir.

16 MR. OPPENHEIM: Just some direction on closings and
17 what your expectations are on that, and your process for that,
18 so that we can make sure we're ready.

19 THE COURT: There's a guy a floor below us who is
20 asked that question, and his response is, do you know how long
21 most shows last on TV? And he doesn't wait for you to say --
22 give you an answer. He says a half hour, not including
23 advertising -- including advertising, and that's what you ought
24 to make it.

25 Actually, the guy on the eighth floor wouldn't give

1 you a half an hour.

2 But, I mean, what do you want? An hour? Do you want
3 more than an hour? I'm going to give you a reasonable amount
4 of time. What I don't want you to do is, you know, beat the
5 dead horse.

6 I mean, the jury has been listening, and I want to
7 focus on them. And you both took a little more than the time
8 allotted in openings, but it was reasonable, and I thought it
9 was very productive.

10 MR. OPPENHEIM: I thought I was 56 minutes on the
11 mark, Your Honor. I was over? Shoot.

12 MR. ELKIN: I was 59 minutes, but I can give him
13 three minutes on the closing. How is that?

14 THE COURT: So is that a reasonable amount of time?

15 MR. OPPENHEIM: Maybe we can consider that over the
16 weekend, but it doesn't sound unreasonable. And we can reserve
17 some amount for our rebuttal.

18 THE COURT: And that will include a reservation for
19 rebuttal.

20 MR. OPPENHEIM: I assume.

21 THE COURT: So if you need a little more, that is
22 something we can consider. But I think that's -- with the
23 length of the trial and the amount of information and the
24 number of witnesses, I think that taking an hour is reasonable.

25 MR. OPPENHEIM: Very well, Your Honor.

1 THE COURT: Okay.

2 MR. ELKIN: Thank you, Your Honor.

3 THE COURT: All right, good. You all have a nice
4 weekend, and we'll see you on Monday morning.

5 MR. OPPENHEIM: Thank you, Your Honor.

6 MR. ELKIN: You too, Your Honor.

7 THE COURT: All right, we're in recess.

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14 CERTIFICATE OF COURT REPORTERS

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16

17 We certify that the foregoing is a true and
18 accurate transcription of our stenographic notes.

19

20 _____
21 /s/ Norman B. Linnell
22 _____
23 Norman B. Linnell, RPR, CM, VCE, FCRR

24

25

26 _____
27 /s/ Anneliese J. Thomson
28 _____
29 Anneliese J. Thomson, RDR, CRR